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By R. Tait McKenzie

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Vol. I SEPTEMBER, 1930 No. 7

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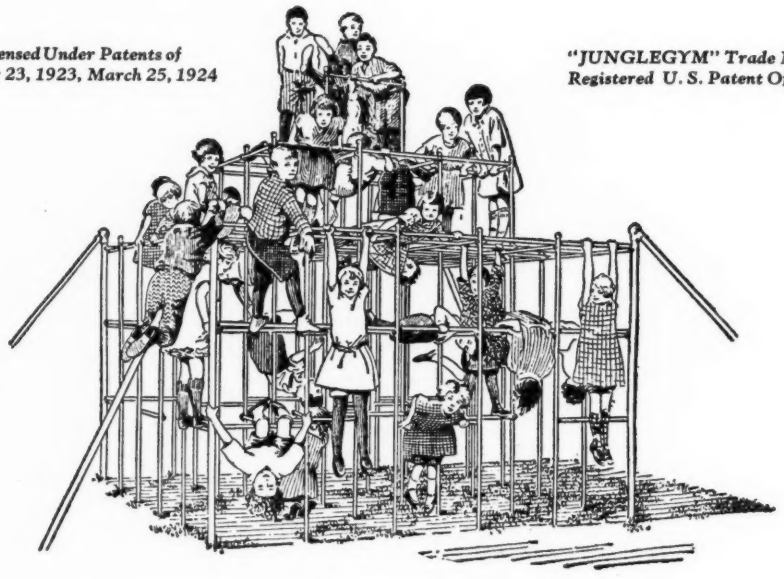

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More Complete Living Through Physical and Health Education*

By

JOHN R. McLURE

Professor of School Administration, University of Alabama

DURING the present school year there took place in one of our Southern states a meeting of officials responsible for the teacher-training program of the state. The meeting was called for the purpose of finally approving curricula for the training of teachers. After a prolonged discussion tentative agreements were reached regarding curriculum requirements for the training of teachers of the various academic subjects such as English, history, mathematics, and the like. At the conclusion of the meeting it was suggested that it might be desirable to set up new machinery for working out the curriculum requirements for training teachers of special subjects including physical and health education.

Here is interesting food for thought. Physical and health education a "special" subject! The meeting referred to reflects a situation which is in no sense peculiar to the South. The treatment of physical and health education activities as something "special" holds true in general in all sections of the country. The result is that, often, traditional subjects are first provided for and then if funds are left, provision may be made for physical and health education. And so when those teacher-training officials worked out curricula for preparing teachers of traditional subjects and postponed consideration of curricula for preparing teachers of physical education, they were influenced no doubt by the same forces which have caused schools generally to adhere to the unfortunate practice of putting the three "R's" ahead of the physical well-being of children.

The status of physical and health education in our schools is lagging entirely too far behind the results of scientific research and present knowledge. The general recognition of the paramount importance of health and physical development is now sufficient to cause an appropriate diffusion of health and physical education activities throughout the entire elementary and secondary school program. Such activities should be basic and not "special." From the standpoint of relative values, I would say that subjects like reading, writing, and arithmetic in the elementary school should be considered the "special" subjects if there are to be any.

The situation that has been described is only one phase of the problem which school administration must face in an effort to contribute towards more complete living through physical and health education. This contribution must be made primarily through the activities of young people in their relationship to the educational program. In this total program, physical and health activities and guidance should have primary consideration. The development of a sound physical and health education program for the school requires the active cooperation of many agencies outside as well as inside the school organization. In this great cooperative undertaking, school administration must of necessity play a role of major importance. Upon the school administrator rests the final responsibility of making recommendations to governing boards and legislative bodies in regard to the entire education program. Upon him also rests final responsibility for the efficient organization and coordination of all facilities which are provided. In the formulation and presentation of the school budget the school administrator holds the key position and the major responsibility for influencing the determination of the education program and of educational policy in city, county, or state as the case may be. The school administrator therefore should have a highly specialized professional training as well as a broad and liberal education.

Some of the difficulties in the way of desirable progress in physical and health education in our schools are: lack of scientific information regarding certain aspects of the content and scope of the program; an archaic curriculum, especially in the elementary schools; inadequate provisions for the school plant; lack of proper facilities for physical and health activities of children; lack of proper appreciation of the importance of physical and health education on the part of the general public; poor organization and coordination of school facilities which are now available; methods of school organization which are entirely out of step with our modern social changes and progress; and inadequate methods of school finance. We can-

* An address given before the 1930 Convention of the Southern Society of the A.P.E.A. at Birmingham, Alabama.

not enter upon a consideration of all these problems, but let us consider briefly the following problems in their relation to the program of physical and health education:

First, the need of scientific research in the field of physical and health education.

Second, the need of curriculum reorganization.

Third, the need of an improved school plant.

Fourth, the need of additional facilities for physical and health services.

Fifth, the need of larger political units for school control and finance.

Scientific Research the First Great Need

When the school administrator faces his responsibility in connection with the program of physical and health education he is confronted immediately with a number of difficulties. In regard to some of them there is abundant evidence in support of desirable procedures. In regard to other difficulties there is a lack of knowledge of how to proceed. First of all, school administration must seek and rely upon information that can be made available to him by competent agencies of experimentation and research both in and out of school. A great deal of the necessary information must come from health and other social agencies not connected with the school. It is necessary, however, for the educational organization to have facilities for conducting studies and evaluating methods and practices. Great progress has been made in recent years in the organization of research divisions and other agencies in school and non-school organizations which contribute to the health and physical development of the child. We seem already to have begun a concerted movement of substituting scientific knowledge for unsupported opinion and in many instances mere sentimentality and false propaganda. The American Child Health Association through its Research Division inaugurated a definite program several years ago for the purpose, among other things, of substituting fact for fancy or mere opinion, in matters relating to health. Other agencies are contributing to the movement. The situation was touched upon recently by Dr. H. E. Barnard, director of the president's White House Conference on Child Health and Protection who was quoted in the newspapers in part as follows:

"Every idea in the field of nutrition has promptly found its way into the school room and carried with it fads and foolishness to command the attention of the teacher and her children until the next new thought supplanted it.

"We have used the school rooms as a means by which the millions of dollars spent in advertising tooth paste can be translated into profits by committing every school child to the now recognized fallacy that tooth decay is definitely related to tooth paste....

"Without doubt we have done many things that have been of little help in establishing health knowledge and health behavior. Now it is high time to find out what to do that will be of the greatest help and how to fit it intelligently into our educational system."

The Need of Curriculum Reorganization

In my judgment we cannot justify the time allotted to elementary education merely to teach the traditional subjects found in the curriculum of the six or more grades comprising the elementary school. There is good reason to believe that the information possessed by the average student, who enters the first year of the junior high school, could have been acquired easily in much less time than that allotted to elementary grade work. This does not, by any means, indicate that we should cut down the number of years allotted to the elementary school. It does mean that we are devoting too much time to certain subjects in the elementary school. There is no doubt in my mind that if we knew how to distribute the time devoted to the elementary school subjects in terms of the readiness and needs of pupils we would secure astounding results in time saved in time-allotments for the various subjects and in the achievements of pupils.

What is needed is a thorough-going reorganization of the entire elementary school program. In attempting to do this the educational philosopher, the experts in various fields of education and human interests, the curriculum researcher, the school administrator, the teacher, and the public must cooperate. Why is the reorganization needed? What is the purpose of the elementary school anyway? In this last question lies the crux of the problem. The place and purpose of the elementary school in modern life is almost entirely different from that in the early days of this country. This institution came into existence as a separate and distinct educational agency, the primary purpose of which was to teach reading and the rudiments of learning to those who, for the most part, would get all of their education in the elementary school. Today, however, we conceive education as a continuous process extending all the way from early childhood throughout the entire period of adolescence. Constantly we are extending education both upward and downward. School children from six to eighteen years of age today, therefore, have an opportunity of getting the three "R's" and other stored up facts of civilization at periods in their lives which are appropriate to their physiological, mental, and social development. Nevertheless, the elementary school in general is at heart the old elementary school of pre-revolutionary days, in spite of the fact that it has had to yield from time to time to many new and desirable activities such as physical and health education. And so, not infrequently, we find that schools with pinched and forbidding environments and deplorable conditions for health and physical development are almost wholly concerned with matters having relatively little vital significance to the real needs of the hour. This primary emphasis of administrators and supervisors upon old forms is often reflected in the way the teacher looks at her job.

If our brief analysis has been correct to this point it is safe to say that the elementary school should be primarily concerned with providing the conditions for *health and complete living* rather than formal teaching. The program should probably be concerned first of all

with the physical and health needs and requirements of the growing child, and, next in order, with such objectives as character development, social development and integration, correct use of the mother tongue, good manners, and then with such facts from traditional subjects as are needed and called forth by the worthwhile natural and daily activities of children. It should be pointed out that physical development and health are not altogether ends in themselves. It is probably true that a sound and adequate program of physical and health education offers one of the best means for the development of character and for social development and integration as well as other objectives in education. It is of course needless to say that a reorganization of elementary education demands a corresponding reorganization of the program of teacher training.

The first great contribution, therefore, that good school administration can make towards more complete living is to accept responsibility for a continuous program of curriculum research and adjustment in both elementary and high school. Attention has been directed to the elementary school, primarily, for emphasis because it seems to me that our elementary school program on the whole is more out of step with true objectives and possibilities than that of the high school, with all of its maladjustments which are, indeed, both numerous and serious.

The Need of an Improved School Plant

There is probably no more glaring inconsistency in educational and social theory and practice than that to be found in many school plants. The physical and health needs and activities of children should receive major consideration in the selection of the school site and in the planning, construction, equipment, maintenance, and sanitation of the school plant. It is unfortunate that there is so little understanding and appreciation on the part of large sections of our population of the vital significance and the importance of the kind of school buildings and grounds to which we send our children. The school plant with its enriched and varied educational program is of vastly more importance in modern society than it used to be when life was simpler and the school program narrower and more restricted. The one thing that needs to be impressed upon the public is that the school building should be built in order to facilitate the successful carrying out of a modern educational program. The educational program is the important thing. The school house should conform to that program.

Unfortunately the educational program must often conform to an obsolete building. There are thousands of school buildings now in use which were built several decades ago or modeled after old and antiquated types. It is almost impossible to conduct a modern educational program in many of these buildings. Worse than this, there are large numbers of school plants which are positively injurious to the health of our young people. There are scores and scores of schools without adequate drinking facilities to say nothing of the lack of sanitary drinking facilities. There are large numbers of schools which have no toilet facilities and often those which are provided are inadequate and unsanitary. Opportunities for the spread of hookworm and typhoid fever still abound in many of our Southern schools. Adequate facilities to enable school children to wash their hands before eating lunch are often lacking. Many school buildings have insufficient heating equipment so that the children are subject to harm and discomfort. Insufficient and improperly placed natural lighting together with no provision, or inadequate provision, for artificial lighting cause injury to the eyes of pupils. In many of our rural schools, especially, the roof, walls, and other features of construction do not keep out rain and cold drafts and hence discomfort as well as injury often results. Lack of school sites of adequate size and restricted play space cramp the spirits and instincts of children and prevent the natural development through play activities and games. These are merely some of the evidences of our lack of attaining desirable standards of school plant arrangement and construction in the interest of the health and physical welfare of the children. One of the most indefensible things of all is that quite often, through lack of adequate leadership, communities are permitted to erect new school buildings which do not embody acceptable standards of school house planning and construction.

The school administrator has in large measure the responsibility of bringing and interpreting these conditions to the public which, as a rule, can be counted upon to respond to the limit of its ability when school administration furnishes the right kind of leadership. In Alabama for example, our Division of School House Planning, in the State Department of Education, has the responsibility of seeing to it that all school houses built with the aid of state funds measure up to desirable standards, commensurate with the amount of money being spent. This is a splendid type of service which the state provides but it is not enough. There should be in every state a state agency for the approval of plans and specifications of new school buildings and major alterations of old buildings. This should apply to all construction costing more than a given amount whether financed in part by the state or not. States in every section of the country have such laws for the protection of children and for economy in the expenditure of public money. One of the greatest needs in connection with the school plant is a better and more adequate plan of financing school building programs. We have reached the point in our educational development where the state as a state should recognize its obligation to help finance school building construction according to some equitable statewide plan.

Need of Additional Facilities for Physical and Health Services

It is not sufficient merely to have a school building constructed in accordance with modern standards including health and sanitary equipment. There are services of an inspectional, supervisory, and instruc-

tional nature that are indispensable. Among these services are those which are rendered by teachers thoroughly trained in the physical and health requirements of children, school physicians, nurses, mouth hygienists, dentists, mental hygienists, lunch room and cafeteria dieticians, trained janitor-engineers or custodians.

When one surveys the status of these services over the country as a whole, he is appalled by the inadequacy of facilities along these lines. It would be difficult to estimate the hundreds of thousands of pupils without the advantages of teachers adequately prepared to furnish necessary instruction and guidance in health and physical education. In some schools it is even yet difficult to get one full period, outside of traditional recess and noon-day lunch periods, for play and physical education activities. Then there is the too frequent absence of the school physician, dentist, and nurse. A mouth hygienist is rarely found in schools in our section. We have yet to grapple in a determined way with the problems of preventing the decay of teeth and diseased gums which afflict a large percentage of our school population. It would be startling to know how many children lose their six year molars because of the mistaken idea of many parents that these teeth are temporary teeth. There is often a lack of proper facilities for the school lunch. Children who are underweight and those who suffer from malnutrition often go unnoticed and untreated. Colds and bronchial conditions and influenza and grippe occur in the school population with great frequency. Malaria, still prevalent in sections of the south, lowers the vitality of many school pupils.

While progress is being made in remedying these conditions, splendid progress in fact here and there in certain cities, the situation on the whole is deplorable, particularly in many of the rural sections. Although Alabama is ahead of all the states in the union in respect to the percentage of its area covered by standard all-time health units available to our schools, this affords only one special type of service in one limited field.

Here again school administration must face the challenge of putting first things first in the light of scientific facts that are constantly being made available. A hopeful sign for future progress is found in the splendid work of the State Departments of Education through their divisions of Physical and Health Education; also in the fact that the number of trained teachers and directors in this field is rapidly increasing.

The Need of Larger Political Units for Local School Control for Finance

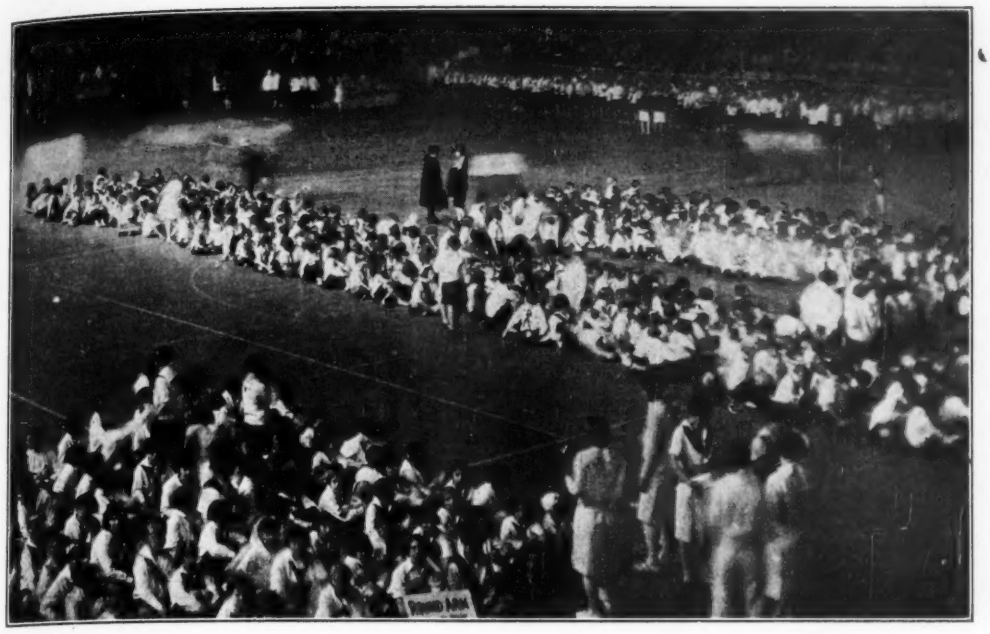
We must not only have standards scientifically and educationally sound and services appropriate to the needs of school children, but we must have a type of school organization and control that will make it possible to carry on the entire educational program efficiently and economically. There are some obstacles which make it impossible to proceed with success and economy, especially as regards education in the rural sections. I shall not attempt an enumeration of these obstacles but I do want to mention one of them, one of the most conspicious and serious of them all. I refer to the district system of local school control and finance. As long as education in the rural sections continues to be influenced materially by the conception that the small local school district is peculiarly responsible for the financial support of the educational program in that district, we shall not be able to attain desirable standards in education. The local district in rural sections is useful for certain purposes and there are also valuable services which trustees or committees can render acceptably. But the small rural school district as a unit of financial support is obsolete and should pass out of existence. The South in general occupies a very favorable position in respect to this matter. In general, the county is in a large measure the local unit for school support.

In attempting to eliminate the small rural district as a unit for school finance we are confronted with a great many difficulties. Educational statesmanship must gradually point the way to the elimination of this evil which contributes materially towards the perpetuation of inefficient small schools and to inequality of educational opportunity. Cities from the largest to the smallest have long since abolished the ward as a unit for school finance and control. The same principle should now be applied to the county by eliminating the small rural school tax district. This step would make more certain and economical the equalization of a desirable educational program for all children.

Conclusion

In conclusion it is pertinent to ask, what has school administration to offer in solving and helping to solve the various problems which have been raised?

While there are cities and counties in every state which have highly qualified school superintendents and while the number is increasing, the situation is depressing when we consider the laws in some of our states which govern the qualifications of city and county school superintendents. In Alabama, for instance, the minimum educational qualifications prescribed by law for city and county superintendents of schools are only three years of college work above high school. Now, by regulations, teachers in accredited high schools in Alabama must be college graduates, and they must have completed a prescribed professional curriculum; principals of accredited high schools must also be college graduates with prescribed professional qualifications. The school superintendent, who is in the last analysis responsible for the entire educational program, is permitted by us to have, and time after time does have, less academic and professional training than the inexperienced teacher who teaches under his supervision. One of the greatest needs in public education today is that of city and county superintendents of schools who have had a minimum of at least two years of graduate work in professional and other fields after having received a first degree from a standard college. *(Concluded on page 60)*



3,998 Girls Participate in Colorful Indoor Carnival Held by Baltimore Playground Athletic Leagues

Mental Hygiene Aspects of Physical Education

By Esther L. Richards, M.D.
Johns Hopkins University

YOU have asked me to speak on the topic of what physical education contributes to mental health. The psychiatrist has long been advocating a larger place for physical education and its athletic associations in the field of education. Our medical confreres, the internists and pediatricians and gynecologists, have been a bit slower in their enthusiasm because they have thought of these matters in terms of straining heart muscle, and dislocating joints, and displacing internal organs. Some of you may belong with me to a medical generation that could see in competitive athletics only athletic hearts, or to a religious generation that felt athletics for girls was an unbecoming activity because it tended to make girls masculine and that the clothing worn in athletic contests bordered on immodesty. But even in a generation that has survived a scant one-piece garment as correct feminine covering, we still hear the head of a great religious organization banning athletics for girls on purely ethical reasons. The psychiatrist's interest in organized play as an educational institution is based on other aspects of preparation for life, characterized by the fact that play, and especially group play, is one of the great balancing factors of the personality.

We have defined mind as the individual in action. It is hard to view this person in his entirety. The quiet, docile ten-year-old boy hardly ever arouses in parents or teachers much thought, let alone concern, about what is happening to his energies; but let a ten-year-old boy disturb home and school and neighborhood with noise, and impudence, and window breaking, and stealing, and the topic of his energy disposal becomes a matter almost for public action. Tradition has tended to exalt child No. 1 as a model because of goodness and obedience and fulfillment of the adage "Children should be seen and not heard." This attitude was the natural outgrowth of the ascetic coloring of former generations which regarded play as akin to sin, combined with the fact that aggressive noisiness irritates grown-ups. Modern study of child health is revealing the fact that child No. 1 is apt to be in a poorer state of mental health than child No. 2. In fact one can almost say "Beware of the good, unobstrusive boy or girl who never gives any trouble, who never gives anybody a saucy answer or a defiant look, who can always be found whenever mother calls, and who prefers to stay in at recess munching an apple, and cleaning the blackboard." The natural behavior of children, like the natural behavior of puppies, kittens, calves, and colts is to be busy, or doing something all the time.

Dr. Gesell's admirable studies of activity in infants and children under two years shows that month by month the range of interests and their accompanying energies increases. Color, sound, and movement grow more and more stimulating, and consequently hold the attention for longer and longer periods. In the seriously retarded child the development of interests, activities and attention is markedly slower. His attention at twelve months is about at the stage of an average six months infant. As he grows older at three or four, or even five, one sees him responding to stimulations that attract a

* An address given before the Women College Directors' Section at the 1930 A.P.E.A. Convention at Boston.

TEAM PLAY

Cooperation is needed for Success

young child. He moves about the room picking up this toy or that, shakes it, smells of it, bangs it up and down upon a hard surface, smiling at the sound, then dashes off to turn a spigot on, or push an electric light button. Not long ago I saw a six and one half year old boy with a mental age of between three and four. It was hardly necessary to make an intelligence test after one watched him in his playroom for a few minutes. This room was filled with elaborate toys—tractors and biplanes and zeppelins, and aeroplane hangars and carpenter's kit, and yards of electric trains on a track. They all looked as if they had never been used. The child would hand me a toy, and then put it back in its place. He was obviously pleased bouncing a large colored balloon, and piling up colored blocks and knocking them down, and putting Mother Goose records on his small victrola, playing them for a few moments and then stopping the machine to put another record on. Constructive imagination necessary to the enjoyment of this playroom was not there. No wonder children of his own age would not play with him, and he was repeating kindergarten with very poor success.

ONE of the outstanding features of educational progress within the last fifteen years is the fact that education is making use of childhood's constructive imagination in nursery school, kindergarten and the elementary school. What hue and cry went up against the pedagogical originators of these ideas! It was argued that children would be inaccurate and trifling, that they would get the notion that school was play and not work, and consequently be ill prepared to meet life's requirements. It was considered positively blasphemous to teach geography as a live subject in contradistinction to the good old method of bounding a country, and memorizing its principal rivers, mountains, lakes, cities, agricultural and mineral products, etc. In like manner the introduction of organized playground work as part of the program of formal education was considered destructive to the bulwarks of national stability. My father, who was born and brought up in the beautiful hills of Northern New York used to say that if it rained on the Fourth of July, the boys had the day for fishing, otherwise they spent the day haying. Life was serious, and time spent in play was considered wasted. But is it? Society in its evolution of attitudes towards play has gone through two periods: first, that of realizing that leisure time is a necessity for the maintenance of a healthy and well-balanced life; and second, that of recognizing the wealth of constructive educational possibilities associated with play and physical training activities.

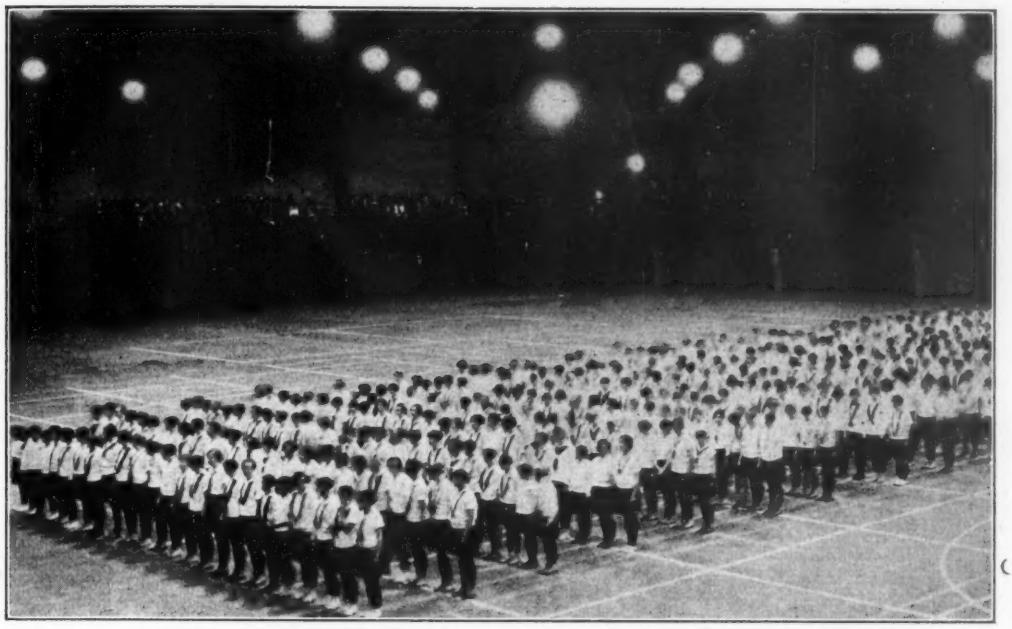
THE necessity for relaxation and diversion in the high powered life of modern times is almost a commonplace, at least among city dwellers. The psychology of relaxation is as yet imperfectly understood in its details of practical application. We know that change of activity does not relax or divert unless it captures the interest of the individual. To walk to and from work daily to fulfill a doctor's prescription for exercise in the open air defeats its purpose unless the patient enjoys this walk. Hiking or walking with a pleasant companion combines muscular activity with emotional satisfaction, and we know that true relaxation and diversion cannot occur without the element of enjoyment. Now enjoyment varies with temperamental require-

GROUP ENTHUSIASM

Action like this leaves no room for introspection

ments. Psychology is spending a great deal of time studying temperamental requirements. It has arrived at one conclusion, and that is the conviction that the individual's temperamental requirements must be discovered early and trained in close association with every other activity in which he takes part if the best possible social adjustment is to take place.

Year by year the physician is confronted by an increasing number of patients who break down under the strain of life. There is no big worry behind the picture of poor mental health, but in studying the individual stories of these patients one comes upon life-long inability to relax. Nothing but work interests them. Send them abroad or on a trip through the Rockies, and they are frankly bored, longing for the whir of business and professional machinery under the absorbing interest of which they will again break down. Logically, then, the place to teach a person to relax is in childhood. It is here that interests begin to develop and habits originate. The energy of childhood was a problem to the Puritan and Victorian. They tried to repress it by requiring the child to repeat poetry, or to sit on horse hair



A MASS DRILL AT THE BALTIMORE INDOOR CARNIVAL

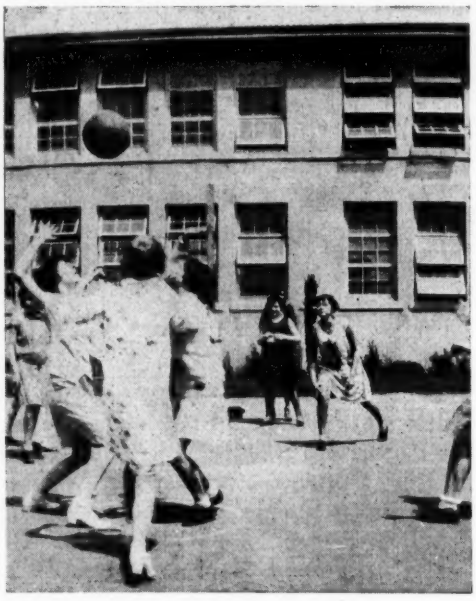
sofas with hourly remuneration. Our present age is not trying to repress the energy of childhood but to cultivate it, and in the cultivation to divert it into wholesome channels of activity. One of the most wholesome characteristics of play is the fact that real play is not solitary. Experience has proven beyond the peradventure of a doubt that the child who prefers to play alone is a child who must be gently but firmly weaned from this preference. We live as grown-ups in a world with other people, and our success or failure depends largely upon our ability not only to get along with other people but our ability to enjoy group contacts. For example, the day-dream or air-castle is a natural experience in every normal human being, but the day-dream becomes a danger when child and adolescent and grown-up fail to express it in action.

SIT down and watch a good playground of an afternoon. Here is a group of ten-year-olds who depend upon the athletic worker to start the plan of a game and they do the rest. Here is another fourteen-year-old group who plan their game and play it, but depend upon the worker to arbitrate issues now and then. And here is still another group, a bit older, who need no worker to plan or arbitrate. They do the whole thing themselves. What does this mean in terms of mental hygiene? It means that childhood growing to adolescence has acquired and learned practically to apply very important habits of self-management. Now we all agree that "He that is slow to anger is better than the mighty, and he that ruleth his spirit is better than he that taketh a city." But it is one thing to treasure this proverb in the archives of memory; it is quite another to practice it in the traffic jams of daily experience. The boy or girl who has learned to do this on the playground will invariably put these principles into use in the business and social relationships of life. We call this teamwork—the ability of a person to submerge his individualism for the good of the group. Power of good adjustment to life must come out of the experience of self-directed thinking, and it is this that formal education of home and school has been in the past so reluctant to permit. Sound physical education has made this its goal and watchword. By virtue of this it is coming to occupy an increasingly prominent place among the socializing institutions of the community. Ten years ago the physician and teacher struggling to plan for a mischievous, energetic half-grown boy could turn only to a barren school yard, or acres of "keep off the grass." Today in our cities and in many towns every child and adolescent has a reasonable opportunity to play a game under the kindly supervising influence of men and women adequately equipped to teach fair play and the spirit of good sportsmanship.

"A HIT MEANS A RUN"

LET me tell you of some child stories in which apparently serious behavior problems were quickly melted by the comfortable warmth of opportunities for play. George was ten years of age when he was first brought to our attention January, 1929. His story was as follows: he was living on the second floor of an apartment with his maternal grandmother who was his legal guardian. She could not manage the boy and gave in to his every whim lest the neighbors should protest at his noise and put both grandmother and boy out of the house. He was a constant truant from school,

would beat his grandmother with his fists or with a chair. The teacher reported the child as bright but so energetic that he was constantly in mischief. The legal situation connected with the family setting of this child was such as to handicap one tremendously in doing much with the case. The father and mother were divorced, and although the Court had required the father to support the patient, he had never done so, and the Court had never done anything about his carrying out its orders. After the granting of the divorce the patient's mother married again. The man whom she married was a member of a family who did not care to be made conspicuous in any way. The step-father did not care to have his relatives know that his wife was a divorced woman, hence any pressure brought to bear on the patient's father to contribute to his support was resented on the part of the step-father. The mother acceded to this arrangement and had practically parked this boy with the maternal grandmother, who had only two or three hundred dollars in the world.



CAREFREE MOMENTS
Recess Activity on the Playground

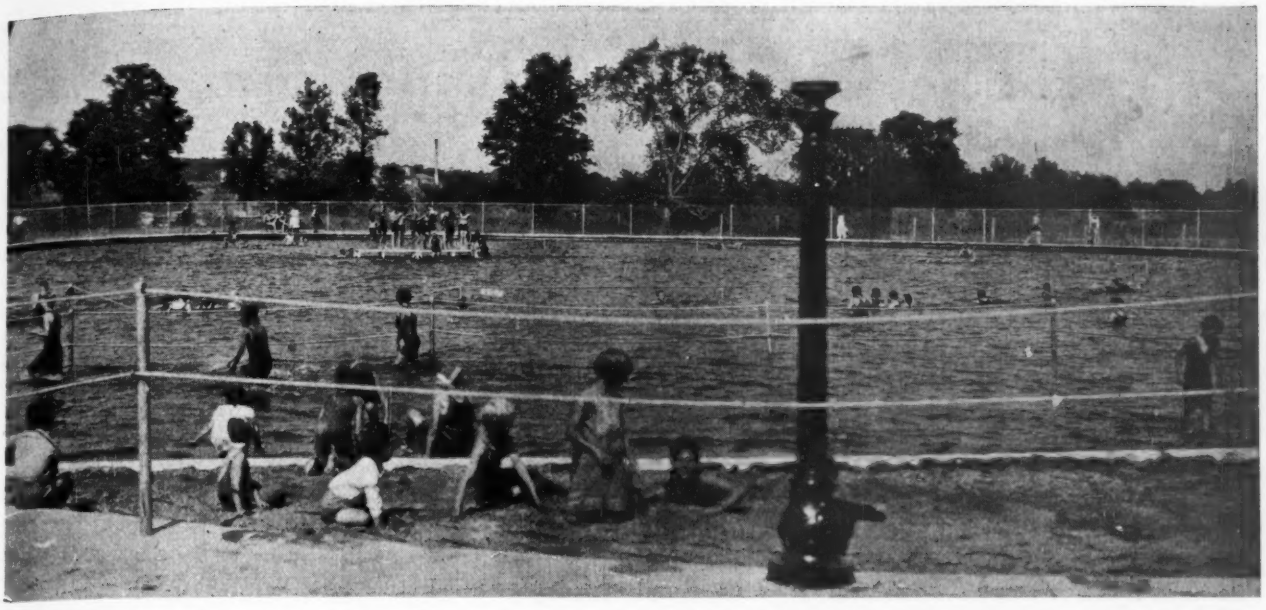
At the time we saw the patient he was ten years of age, had an intelligence quotient of 100 and was in the fourth grade in school. We tried to arrange boarding the patient and his grandmother in a Henry Watson Aid boarding home. The boy's conduct debarred him from two private schools in Baltimore which would take bright boys and bring them up, but shied at behavior problems. He could not enter the McDonogh School until twelve years of age. What to do with him during the two years was a great question. He was finally placed in an orphanage, where things went very badly. He was destructive, breaking windows and showing off his strength at the expense of the washing machine. The grandmother got to see him almost every day in spite of all the precautions the institution could take. However, the Orphanage put up with him, and in April, 1923, he took the examinations for the McDonogh School and entered in June, 1923.

WE have in this child an example of what a good boarding school can do with so-called problem material, provided that the real problem is thoroughly understood. The real problem in this boy's case was that of finding intelligent means of meeting abundant energy and initiative of a healthy boy. If such a boy has not enough to do to absorb his time and fix his attention, he is bound to put his energy into activities that are serious, such as stealing, sex misconduct, truancy, and rowdyism. The sex misconduct, the stealing, the rowdyism classify him in the minds of all sorts of people—teachers, clergy, and non-professional layman—as a delinquent.

"Ah," you say, "it is easy to see how play is an educational factor in such a child as George, but what about its value in other kinds of misfitting youngsters?" One of the most annoying forms of vague and inchoate groping after some form of social achievement is seen in the child who is solitary, and yet wants to make friends because of personality qualities in herself which she does not understand. Not infrequently this takes the form of a strong attachment to some one person of the same sex who seems to embody the ideals of achievement that the child wishes to make his own. A student in the senior class, or a teacher may be the victim of this attachment. We call the social relationship a "crush." Every teacher has experienced such a situation, and in handling it is torn between pity for the child and fear of establishing an unwholesome emotional relationship that may be characterized as homo-sexuality. Every situation of this kind calls for an understanding of the individual child on the part of the teacher. Don't jump at once to the conclusion that you have struck an abnormal individual. Take time and patience to find out what it is all about, and see if you can make this solitary attachment inclusive of other people and other interests. There is invariably a life story behind it. In most of these children you will find a human being who is starved for affection in her family relationships for a great variety of reasons, has never been allowed to mingle fully in play with other children, or who feels awkward and diffident about making overtures to her fellows because she is ashamed

PULLING FOR THE TEAM

to invite them home, or because she believes her clothes and spending money are not such as to constitute an adequate basis for social equality. The child may not have thought all these things out, and yet these reasons may unwittingly lie behind her curious conduct.



SWIMMING, SAND PLAY, SUN, AND COMPANIONSHIP MAKES FOR HEALTHY MINDS AND BODIES

FRANCES was a girl of fourteen when referred in May, 1927, because of concern felt by her teachers because she was expending a great deal of energy on a teacher—writing her long letters, standing outside her house, waiting at places where the teacher was liable to be. Physically Frances was in good condition. Intellectually she made a good showing. Socially the child never mingled with her classmates, and seemed solitary and lonely. She was the only child of a lazy, conceited, mentally retarded father who had not done any work for years because he thought he wasn't able to, and who found his wife willing and able to support the household. The mother was a worn, hard-working, intelligent woman who for years had suffered from real heart trouble. She had tried working in department stores, but finally became able to work only in her own home making articles so attractive that they were easily saleable. Home was a continuous atmosphere of wrangling and dissension, in which Frances took the mother's part. The child was frankly ashamed of this place, and felt she could not mingle with her classmates because of her inferior economic condition. After school she had to help with the housework and deliver her mother's wares to customers. She cordially hated her father. At times he would strike her, knocking her down. Since her mother endured him, the child felt that she should do likewise. The emotional part of her social nature went out to a teacher, and expressed itself in the manner I have described. School was her one source of interest and into it Frances put all her enthusiasm. The teacher had been interested in this child from the first, but when she realized the extent of Frances' attachment she became puzzled as to how to manage the situation. We explained matters to the mother and got permission for the child to get out more. She joined the Girl Scouts and went to their summer camp and that of the Y.W.C.A. One afternoon and evening every two weeks she spent with this teacher. Sometimes they went out to a movie or concert or theater, and sometimes they read and talked. At the same time Frances took work at the Maryland Institute, completing a course in Costume Designing. She decided to take up teaching as a profession. In June she graduated from high school.

In Frances we see the need of the socializing influence of group contacts—and there is no better way of acquiring this than through the contacts of competitive games. I am not at all in sympathy with the view of certain popular leaders in physical education that competitive games for girls and women are psychologically unsound, because they do not teach cooperation except in the ways of war. They would seem to doubt the value of *esprit de corps*. In a child like Frances a group game represents a point of neutral contact between her and the classmates whom she would like to know better, but is too repressed to put her wants into action. In group games she is relieved of self-consciousness; she is one of a team with common goals of achievement and can express herself without handicap from native inhibitions.

PLAY as an educational factor must constitute something more than an outlet for pent-up energy. It must divert the energy in accordance with individual urges and tastes and emotions. Tennis, swimming, walking, horseback riding are excellent ways of getting exercise that build up tissues and take care of body wastes, but they are essentially solitary in their functioning. I have for a long time taken pains to ask men and women and adolescents of both sexes who were in need of mental hygiene and psychiatric help what were their favorite forms of recreation in adolescence or in preparatory schools and colleges; and the majority of them report these solitary activities of swimming, tennis, walking and horseback riding which they elected to substitute in prep-school and college for bas-

(Continued on page 51)

The Control of Ringworm

By L. B. CHENOWETH, M.D.

Professor of Hygiene and Director of the Students' Health Service, University of Cincinnati

RINGWORM is a group of skin diseases caused by a group of moulds, and characterized by a variety of skin manifestations. The name is unfortunate because the infective agent is not a worm, and the lesions in the skin are not always in the shape of a ring. It is important to bear in mind that in ringworm we are dealing with a *group* of diseases and not a single condition; which explains why some cases readily clear up when treatment is instituted, and others do not. Any region of the body may be affected, but in young adults the mould attacks the skin between the toes and on the feet more frequently than any other portion of the body; the next most common place of attack is in the groin or crural region. In these two places one will find almost ninety per cent of ringworm, with almost seventy per cent of ringworm on the feet.

We used to think of acne (blackheads and pimples) as the most common skin disease of young men. We now find that ringworm has usurped first place, so much so that its prevalence has caused grave concern among physical educators, these people fearing that the disease may seriously handicap their work in the future. Fortunately young women are less often attacked but the incidence of the disease is greatly increasing even among them.

Most of us who have had a long contact with the disease feel that it could be prevented if we could disseminate the knowledge of the nature of the disease, its methods of spread, how it can be easily detected, and, more important than all, how it can be prevented. Unfortunately many people have adopted a fatalistic attitude toward the disease, feeling perhaps that the problem is insoluble. Our experience has taught us that like almost every other health problem the results (within certain limits, of course) are solved in direct proportion to the intelligence, effort, and perseverance expended by those in authority.

First of all we must realize that ringworm is a group of diseases and not a single condition. This explains why some cases are very easily cleared up while others seem to be almost incurable. Unfortunately medical mycology has not developed to a high degree, and our methods of culture, isolation, and identification of the various moulds are really not to be compared with our knowledge of bacteriology. This, of course, is easy to explain, because the moulds have caused either the rare or trivial diseases of mankind. The serious mould infections are fortunately rather rare; and the minor ones, such as ringworm, seem to the bacteriologist so trivial that he is not much interested in them. This state of affairs is unfortunate for there are many parts of the problem which could no doubt be solved by a competent mycologist. Most of us have had to depend largely upon a clinical trial and error method which has been time-consuming and unsatisfactory.

The locations of the lesions have been found to be: (1) between the toes, usually between the fourth and fifth toes of both feet; (2) in the groin or crural region and extending down the inner sides of the thighs; (3) along the margins of the nails of the hands and feet; (4) on the trunk, particularly the *front* of the chest; (5) under the arms; and (6) on the bearded portion of the face ("Barber's Itch"). It is a noticeable fact that *where the hands cannot reach, ringworm is not found.* We feel therefore that self-innoculation is one of the most important factors in the spread of the disease over the body. Ringworm of the hair, so prevalent in children, is practically unknown in the adolescent or young adult.

SOME of the distinguishing features of the disease in the webs of the toes are: (1) excessive scaling or shedding of skin; (2) change of color of the skin usually to a lighter color; with (3) the formation of small blebs containing fluid; (4) usually itching, sometimes intensely; and, finally, (5) cracking between the toes. The skin of the webs of the toes usually has a swollen or boggy appearance, and is very often quite white. Sometimes the toes are rather reddish in color, with an elevation and a roughening of the skin where the lesion is located. Not infrequently the fungus spreads to the toe-nails which causes them to become muddy in appearance, sometimes black, to loosen, and often to fall out. This chain of symptoms is especially noticeable in the great toe nails. The same sort of lesions may appear in the finger nails. Roughening of the surface of the nails is also another outstanding feature.

Ringworm of the plane surfaces of the body is more apt to grow in the form of a ring with a bright reddish, festooned edge, surrounding a patch of skin which looks normal except for a change in color. Sometimes the edge is distinctly elevated, and it is from this edge that the threads and spores of ringworm may be obtained for microscopic examination, by soaking scales of the skin in a 15 per cent potassium hydroxide solution in 50 per cent glycerine.

The disease is more prevalent in the spring, summer, and autumn than it is in the winter. Many patients complain that it breaks out in warm weather only, and they seem to be quite free from outward manifestations of the disease at least during the winter. This brings up a clinical observation noticed by everyone that sweating, and consequent maceration of the skin, predisposes to infection with this parasite, whereas drying tends to retard its growth. Those who suffer

most from sweating between the toes and in the crotch are more apt to pick up the infection. Excessive sweating may be reduced by the judicious use of aluminum chloride in acid solution, applied locally. I hesitate to mention this because by the excessive use of this drug the sweat glands may be destroyed and such destruction is not beneficial to the individual. In the hands of a careful physician, however, it is a useful remedy to prevent this troublesome condition. Thymol iodide applied as a dusting powder between the toes also has a tendency to dry up excessive perspiration. Thymol iodide also has a retarding effect upon the growth of the ringworm parasite and therefore is a rather safe substance to use in the treatment of ringworm associated with excessive perspiration.

THERE is very strong evidence in favor of the view that the spores of ringworm are widely spread wherever people go barefoot indoors. It is believed that the threads and spores grow in a felt-like mass between the two layers of the skin, and are constantly shed by the patient as he sheds his skin. In the bath the individual scrubs off an enormous amount of the horny layer of his skin. He uses soap to help dissolve his epithelium. We have every reason to believe that the ringworm parasite is not killed with soap and water but is put into a form which is readily absorbed by the skin of someone else. The view is probably correct that the floors of shower rooms contain the organism in greater abundance than any other single place. An actual case may serve to give evidence of the infectiveness of the shower room floor. Two students at the University of Cincinnati were skylarking and wrestling in the shower room while they were taking their baths. One youngster was evidently outclassed by the other, and the latter literally wiped up the floor with the former, who later came to the Health Service with ringworm almost completely covering his body. The ringworm was in such unusual places that the physician who treated him came to the conclusion that he must have gotten the infection in an unusual manner, whereupon the story of wrestling in the shower room came out.

Not only are gymnasia shower rooms polluted but we have good reason to believe that all places inhabited by a large and transient group are likewise sources of infection. These include the cabins of transatlantic, coastal, and lake steamers; swimming pools; and other places of a similar nature. The disease seems to have spread all over the world; one of the most stubborn cases we have ever seen in the Health Service came directly from Shanghai, China. The sources are so widespread that we cannot hope to control the disease by a control of the environment, as is successful in many diseases, but must depend upon the education of people in matters of personal hygiene that are directed against this disease.

IN the University of Cincinnati we have adopted a plan of disseminating knowledge concerning the prevention of ringworm by pasting a sheet of directions on the inside of every locker door. These directions read as follows:

PREVENT RINGWORM

The prevention of ringworm is an individual matter. No matter how clean the locker and shower rooms may be, they can be contaminated shortly after a person with ringworm uses them. Therefore it is very important that you take the following precautions to prevent the disease in yourself.

TO PREVENT RINGWORM

1. Wear rubber clogs, bathing slippers, or wooden shoes in shower rooms.
2. Do not wear socks, shoes, or clothes belonging to anyone else.
3. Boil all gym clothes every week.
4. Paint toes with 2% mercurochrome before dressing in locker rooms.
5. Do not walk barefooted around rooms, showers, or bath rooms.
6. Have bath tubs and tile floors in your homes or fraternity houses cleaned with strong chlorinated lime solution.
7. Remember the infection or reinfection is gotten from shoes, socks, floors, bath tubs, bedclothes, etc., or direct contact. Protect not only yourself but think of the other fellow and protect him; the affection is contagious.

In case you have itching or cracking between the toes, report to the Health Service for a diagnosis.

Rubber clogs and wooden clogs have been manufactured to keep the feet from the floor wherever contamination may be suspected. They are not very expensive and can be purchased from most athletic supply houses.

INASMUCH as clothing may not be sterilized by boiling alone, every gymnasium should install an efficient autoclave or steam sterilizer where gymnasium clothes can be sterilized with steam under 20 or 25 pounds pressure for about 30 minutes every time the clothes are cleaned, or as frequently as possible. It is quite obvious that leather goods and paper maché would be ruined by such a process, therefore the same shoes should never be issued to more than one person. Football equipment should be thoroughly sterilized as frequently as possible. We find more ringworm among varsity athletes than any other group of people.

We notice that mercurochrome solution is efficacious in the very early treatment of ringworm, and we have assumed that it may be used as a prophylactic. Therefore we have recommended its general use as such to every one using a gymnasium or swimming pool. It is not irritating, and we can estimate the amount on the skin by its color.

It has been believed that strong chlorinated lime solution will destroy the organisms, although this is far from proven. Until more work is done on the efficiency of various germicides with reference to ringworm we cannot be sure that any one of these substances is at all efficacious in killing the spores.

Because the individual with the disease is the source and fountain-head of new cases, we have directed every effort towards cleaning up the old cases in the hope of preventing new ones. We think that we notice a distinct reduction in the number of cases occurring since we adopted this policy at the University of Cincinnati. We excuse from military drill or gymnasium

(Concluded on page 57)

Greek Running Girl

Aristotle on Kinesiology

The Discobolus (Myron)

By Jean Chryssafis

Director of the Division of Physical Education, Ministry of Public Instruction, Athens, Greece

This is the third and concluding article of a series by Mr. Chryssafis on Greek Physical Education

Voluntary, Involuntary and Non-Voluntary Movements

WITH respect to movement, Aristotle supposes a common cause of action for the execution of any movement whatsoever. This cause is preëxistent in beings that move of themselves. Inanimate beings are put in motion by means of an exterior agent whereas living beings move by means of their own power. In other words, desire or volition gives the animated being the impulse to move whenever some change takes place in the creature's sensation or imagination. Consequently, the desire itself is that which occasions movement, the desire itself having been put in motion by another force. Heat and cold, both those which are produced by an exterior agent as well as those which are conative in animate beings, are also the causes of movement. In general, every movement which is not imposed on the body by rational volition is the result of a change in molecular structure. Such movements, for which there is no need of intellectual intervention, are made very rapidly.[1]

HOPLITES RACING IN ARMOR

Animal and Human Mechanics

Each object which puts itself in motion has need of another immobile body; for, obviously, movement without something immobile is impossible, especially for animals. A member of the body is always immobile at its origins for it is only the part which is underneath which makes the movement. For example, when the arm moves the olecranon remains immobile; again, when the whole upper extremity is moved, the shoulder serves as the point of support. In the same manner, the knee is the point of support for the shank, even as the hip serves for the lower limb. Animals have need of immobile points of support both within themselves and outside their bodies, for all animals that move themselves execute a movement by supporting themselves on an exterior object. Similarly, with respect to the members of the body which execute the movement, one part should remain immobile while another is in movement. Moreover, the one which makes the movement always leans upon the other which remains immobile. These general observations on kinetics by Aristotle are completed in his tract *Concerning the Walk of Animals.*

The Directions and Their Conjunctions toward which the Movement is Made. Expansion and Contraction are the Origin of Every Movement.

At the very beginning Aristotle observes that the change of place (displacement) of animals is usually made forward, because there is not a single creature that possesses naturally the backward movement. He also remarks that the part on which Nature depends—sensitivity and the part from which sensation comes—seems to be located in the fore-part of all animals.

In examining the elements of movement, Aristotle discerns at first the six directions associated with size: height, depth, front, rear, right, left. These are divided into three conjunctions, or syzygies, each being of two parts. The first syzygy is that of height and depth; the second, that of front and rear; the last, the right and the left. To these directions Aristotle adds the principles of the movements of locomotion; that is, expansion and contraction. These two movements exist of themselves and act of themselves, but an object that is displaced by another possesses only an accidental movement.

[1] This fact is recognized by contemporary physiology which counsels us to search into a number of circumstances for the source of automatism in exercise. See especially, E. Lagrange: Physiologie des Exercises du Corps, Chapter I.

It is also worth noting that although Aristotle had determined the six directions toward which movement may be executed, as well as the principal form of movement, expansion and contraction, he never made *exterior* agents the basis of movement when he was concerned with determining the movement of the human organism and with making use of it for the physical development and perfection of man. On the contrary, Aristotle has considered gymnastics as belonging to those sciences "which do not remain separate and self-contained," but which embrace an entire order of facts related to physiology, kinesiology, and to the philosophy of mental life and human behavior. Consequently, gymnastics, on its part, should "study without exception everything that relates to its special aim." Aristotle proposes the following as the primary and fundamental questions which the science of bodily exercise has to study:

1. What is the utility of the various exercises?
2. How should exercises be modified so as to be adapted to the diverse temperaments?
3. Is not the most salubrious exercise necessarily that which is most suitable to the most rigorous and most beautiful constitutions?
4. Which exercises are feasible for the greatest number of men?
5. Is there one of these that can be applied equally to all people?[2]

These Aristotelian principles, which at the present time form the general plan and fundamental basis of every system of scientific and pedagogic gymnastics, were wholly unknown to the majority of the so-called founders of pedagogic gymnastics of the last century. These "founders" were unable to conceive the principles by themselves and were led astray by external agents. They observed solely the form and the direction of movement, because they forgot completely that the human ensemble is not an inorganic physical body, but, on the contrary, the most perfect and the most complicated of all the organisms which Nature has created. Having proceeded in the direction indicated by external manifestations, these men created the methods of physical education which they have qualified by the term "pedagogic." Essentially, however, these methods have nothing whatsoever to do with physiological physical education.

One of these "founders," Adolf Spiess (1810-1858),[3] conceived the altogether naive plan of resolving the problem of choice and of arranging the movements in methodical order by means of the six primary directions and the two primary movements, flexion and extension. Moreover, he added to these fundamentals the movements derived from them: i.e., rotation and circumduction. His scheme was to combine all these factors according to mathematical arrangements and combinations. He used as a basis a false and anti-physiological[4] principle which is attributed to Pestalozzi, that "every movement which the human body can execute is useful and good." With this principle in mind, Spiess imagined that by putting into movement the six parts of the body[5] in the six afore-mentioned directions[6] and by making them perform alternately the different forms of movement[7] he would obtain as a resultant the ensemble of movements which the human body could execute. He aimed at such an effect because he believed that this would be equivalent to perfect physical training.

In such a way, Adolf Spiess entirely separated muscular work from all the great vital functions like respiration and circulation, for he considered all the movements of the body as having the same significance in vital economy. Moreover, not having the least idea of the mechanics of the human body, he imposed on all the movements the same rhythm without taking into account the part that was put in motion; that is, he failed to consider the lever by which a movement is executed and the extent of a movement. By such constant aberrations, he removed from his system every hope of ever being reconciled with the physiology of human movement.

By such a work of the imagination, without recourse to any of the data of physiology and the mechanics of the human body,[8] the famous *sexalateral method* was brought to light and its inventor felt obliged to write *four* volumes for the *science of physical education.*[9] Moreover, his disciple, Johann Jakob Happell, also believed himself compelled to complete the work of the master by writing additional volumes, of which one[10] contains more than five thousand figures!

Such work invites the obvious comparison with the contributions of Guts Muths, that philanthropic sage who is the true founder of German gymnastics. In spite of his work, however, many of his successors assumed the title of "founder" of a particular method without having given themselves the trouble of knowing intimately the colossal labors which German science had accomplished up to their time in physiology and in the mechanics of the human body. May then the reader permit me to declare freely that each time I make the comparison between Guts Muths and these "founders" I am always reminded of the words of Heinrich Heine apropos of the lawyers of Göttingen who had always "newly conceived some little system, or some little hypothesis, or some similar little abortion from their own little heads."

Mechanical Explanation of the Habit of the Right Side. The Right Inaugurates the Movement.

Among animals which are able to move from place to place, the change of place is sometimes made by the displacement of the entire body at a single time as we observe among the saltigrades. Sometimes, however, the change is brought about by certain parts of the body as we note among all the animals that walk. In these two changes, the creature put into motion always changes from one place to another by supporting itself

[2] For the application to all is the final aim of gymnastics (Politics IV, I).
[3] The Germans still consider him as the founder of their scholastic gymnastics.
[4] False, at least, in that which concerns physical education.
[5] Two arms, two legs, head, trunk.
[6] Up, down, forward, backward, right, left.
[7] Flexion, extension, rotation, circumduction, etc.
[8] Such data, nevertheless, were well known and circulated during the time of Spiess.
[9] Die Lehre der Turnkunst, Basel 1867-1885. Containing more than 900 pages.
[10] La gymnastique de l'homme sain des deux sexes et de tout age, 1886.

on the base which is located beneath it. This holds true if the creature is supported there only for a very brief moment, or if it has all the time in the world to support itself on this base in accomplishing the movement. The result of it all is that if this base disappears just before the creature, in leaning upon it, can move itself, no movement can take place. In like manner, if there is no base at all for the creatures which should displace themselves, not one of them is able to make the leap by supporting the upper part of its body on itself and by supporting the whole on that which rests beneath its feet.

An example is found in the flexions: the diverse parts of the body are supported reciprocally, the one upon the other; and, generally speaking, that which exerts pressure supports itself on that which is pressed. Aristotle demonstrates the absolute necessity of these points of support. He points to the athletes of the pentathlon who jump farther by holding onto dumb-bells than when they do not have them. He also observes the runners who run faster when they balance the arms. All amateurs of physical exercise also know that jumpers of the free jump without start, have not yet been able to surpass the records of the jump without start with dumb-bells, nor even to attain the same mark. It is for this reason that many of the acrobats and those who perform stunts of strength and dexterity make perilous leaps, holding onto large dumb-bells with their hands. In this manner they reap a two-fold benefit: they find a real point of support in the dumb-bells and thus execute the leap more easily, and at the same time they dumfound the spectators not initiated in such tricks.

Plato had declared that Nature had not created any difference of strength or dexterity between the right part and the left part of the body. He said that it is really due to men themselves—to the imbecility of nurses and mothers—that we have just missed becoming cripples (Laws, VII, 5). Aristotle, in opposition to Plato, believes that "the right side is naturally the point or part in which the movement of locomotion is initiated in every animal." In further support of this idea, Aristotle considers the right half of the body as the active part while the left is nothing more than a support on which the movement is made. Of the animals it is man who conforms most closely to nature. Moreover, in the natural order of things the right (the active member) is worth more than the left and it is isolated. Moreover it is more particularly true in the human race that the right is the more adroit.

Aristotle confirms this opinion by the following observations. Here is one proof that movement really begins at the right: *everybody carries his burdens on the left.* For the same reason, one can rest better and hop better on the left foot, for it is naturally the right which moves and the left which is moved. Consequently, it is also imperative that the weight repose not on that which should move itself but on that which should receive the movement. Obviously, if the weight were placed on the member which commences the movement, either there would be no movement whatsoever or this movement would be much more difficult. Another proof that movement actually begins by the right is the position which is always taken when an individual throws something. The left is always advanced and to strengthen the position it is more particularly the left which is placed ahead, at least under the condition that everything is done casually. All wrestlers and pugilists assume the on-guard position by advancing the left foot. Indeed, even when they are not on guard but remain almost in an erect position, they advance the left foot. The left foot is always advanced—except when sheer caprice inspires the contrary—for the movement is not executed by that which is advanced but rather by the member that remains behind. Conversely, it is by the right that one assumes the defensive position.

The movements of animals are made by means of the displacement of their weights. Each animal moves itself by transporting the weight of the members which make the movement to those which remain inert. The resistance of the feet adds to the equal distribution of the weight and limits the oscillation of the whole body. In this manner the body is permitted to advance on each limb alternatively.

Flexion and Extension are the Two Fundamental Forms of Every Kind of Movement.

The two principal movements by means of which the whole body is displaced are *flexion* and *the making of a straight line.*[11] Flexion is the change from a straight line to a circle or to a re-entering angle. The making of a straight line is the change from a circle or re-entering angle to a straight line. Aristotle adds that even among the creatures which do not have feet and progress by undulation, movement is accomplished by flexions. Sometimes this is done on the ground, as among serpents; sometimes, above the ground, as among the worms which lift themselves above the earth. *These undulations obviously are nothing else than flexions.*

Without flexion there would be neither walk, nor flight, nor swimming. Moreover, since the animals provided with feet ought to hold themselves alternately on the one and the other of the two opposite members, and thus carry the weight of the body, it must necessarily follow that when one of the two advances, the other is inflected. It is only too clear that the corresponding members ought naturally to have the same length; and, moreover, the member which carries the weight of the body ought to be quite straight, as a perpendicular based on the earth. But when the member advances, an hypotenuse is formed, and it becomes equal to the intermediary line—to the length which does not move at all. Again, when the members are equal, it is necessary that the member which remains in place be inflected, either in the knee, or in the joints. The inflection is in the joints among walking creatures that do not have a knee.

Aristotle refers to the making of a straight line as *extension.* In the tenth chapter of his book *Concerning the Walk of Animals,* he says, among other things: "All creatures can displace themselves only by means of flexion and extension, inasmuch as all are able to pro-

(Continued on page 54)

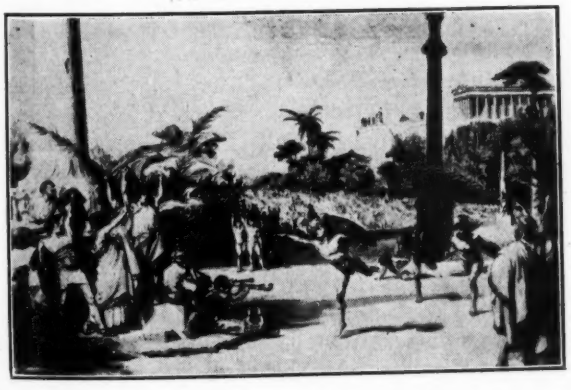
[11] In anatomy these are called flexion and extension.

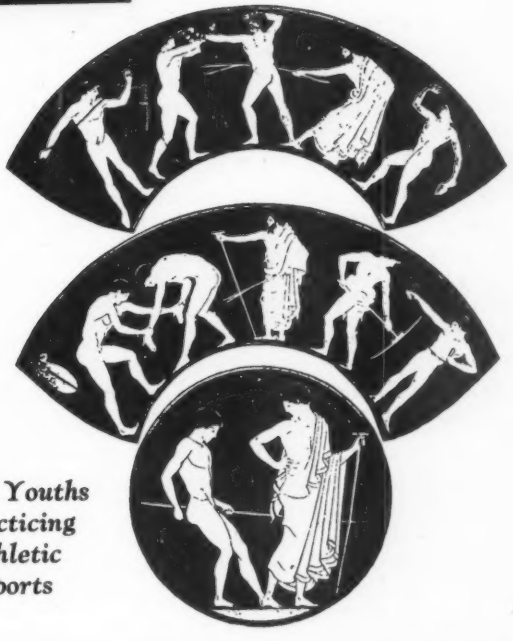
The Pancratium

The Wrestlers

The Pentathlon

Finish of the Shield Race





Greek Youths Practicing Athletic Sports

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Member-Responsibility

THE American Physical Education Association hopes to make the coming school year an outstanding one from the standpoint of increased membership and national promotion of Physical Education. An excellent start was made last spring when President Maroney appointed several committees to present findings on important problems constantly confronting the physical education teacher. One committee, headed by Dr. A. G. Ireland, makes a valuable report in this issue of the JOURNAL.

The past summer several schools put on drives for memberships among their students with the result that the Association starts the fall with many new members.

Now, as the schools are just opening, a number of state and city directors have requested membership blanks for distribution among their teachers. This interest promises a healthy growth for the Association. Other gratifying signs of interest are found in the recent formation of the Northwest Section of the A.P.E.A., and in the word from California that leaders there are organizing a Section for the Southwest.

The Officers and Council Members are all giving valuable time and effort to the promotion of the plans outlined for the coming year. The Program Committee has already made progress on the next National Convention in Detroit.

All this is preliminary to the real effort which it is possible for the Association to make. The ultimate strength of our organization lies in the interest and active support of each individual member. Therefore, we urge each member to accept responsibility for his or her share in the promotion of the American Physical Education Association. A strong national organization will keep Health and Physical Education in its prominent place in the foreground of general education and social welfare, and every professionally minded teacher will want to work to that end.

There are many possible ways to help which may not have occurred to our members. Briefly, we list some of these for you to keep in mind:

First—Work for new members. The larger our organization, the greater influence it can wield.

Second—Attend your state, sectional, and national conventions whenever possible. You will gain, not only from the program, but from the contacts that you will make, and from the inspiring professional spirit that you will find at these gatherings.

Third—Help the publications of the association. Send in articles, news notes, book reviews, and contributions to "The How We Do It" column whenever possible. We particularly need illustrated articles.

Fourth—Patronize the advertisers in our columns whenever possible. They are our friends. The JOURNAL depends upon the financial support of its advertisers; and they in turn should receive first consideration in our buying. In order to give proof of our appreciation of their support, we urge that you mention the JOURNAL when writing to business firms.

Although your own contribution may seem small to you, you must remember that many of these contributions in the aggregate make for impressive results. While it may be impossible during the coming year for the Association to make individual acknowledgments, nevertheless we want you to know that the Officers and Council are grateful for your support.

National Recreation Association

THE following notice was recently sent out from the offices of the Playground and Recreation Association of America, at 315 Fourth Ave., New York City:

"Legal steps have just been completed changing the name of the Playground and Recreation Association of America, Incorporated, to National Recreation Association, Incorporated. It was found that local boards administering playgrounds and recreation centers are more and more being called recreation boards. Friends in localities and writers in the newspapers refer to the Association as the national recreation association.

"Recently Secretary of the Interior Wilbur spoke of the recreation movement as being so much more than children's play, including as it does, music, drama, handcraft, nature interest, as well as athletics and games, and serving as it does, not only the necessary play of children, but the leisure time of working adults as well.

"The old name was too long and it was a little hard to pronounce. It was hard to secure its common use. The National Recreation Association hopes to be able to do more than ever before for the playgrounds for children which suggested its original name, and also to be of service to all the people of the country in the more varied modern needs—for parks, athletic fields, swimming pools, community centers, musical and dramatic facilities and other opportunities that constitute an interesting and rich recreation life."

Joseph Lee, *President.*
H. S. Braucher, *Secretary.*

This announcement will be of moment to all members of the American Physical Education Association because the two organizations have so many interests in common. For many years The Playground and Recreation Association has given farsighted and efficient leadership to an important educational and social movement which every day is growing in public recognition. In addition to its publicity and field work in recreation, this organization has worked aggressively to secure state legislation for health and physical education. The Playground and Recreation Association has had a record of achievement and we wish it the same continued success under its new name.

Uniform Certification Urged Upon States

National Committee Makes Recommendations for the Certification of Teachers, Supervisors and Directors of Physical Education

THE recommendations submitted herein are those of a committee of the American Physical Education Association who, over a period of two years, studied current state requirements with a view to evolving a code of standards leading to general uniformity.

The purpose of the study as established by the committee read as follows:

1. To study the regulations and the procedure of the several states for the certification of teachers and supervisors of physical education.
2. To study certification in relation to the professional status and the administration of physical education.
3. To construct, from the data obtained under numbers 1 and 2, a set of standards by which certification requirements may be established on a basis of general uniformity.
4. To recommend to the several states for adoption, such standards and procedures as may be developed under number 3 above.

The procedure was in no way remarkable. State Departments of Education were solicited for information and for copies of the regulations concerning certification. These were studied and the essentials tabulated. A year later the data was re-checked and from that summary the recommendations of the final report were drawn. The recommendations used as a basis were those in force for the year 1928-1929.

Members of Committee

A. G. Ireland, *Chairman*
W. G. Moorehead
J. H. McCurdy
C. L. Schrader
N. P. Neilson
F. R. Rogers

The significance of the study was manifest from the first compilation of data which revealed, (1) a lack of requirements in some states, (2) an inadequacy of requirements in others, and, (3) the absence of national standards and any general agreement by which the states could be governed in establishing uniform requirements.

A Statement of Findings

The regulations of the states vary within a wide range of possibilities. Several states have none while a few have standards approximating the ideal. Between these extremes the variability is great. The reasons for this status are not obscure but for the purpose of this thesis no analytical treatment of them is necessary.

There is also evidence of instability in the standards of a state. For example, there may be requirements for special teachers of art, music, or manual training, but none for teachers of physical education. The difference also appears in contrasting classes of teachers. That is, there may be relatively high standards for classroom teachers and low standards for special teachers. These distinctions seem to be disparagingly unfair and technically unsound. Moreover, they seem to indicate that physical education is not conceived in its true worth by the authorities responsible for certification.

The requirements of many states offer no obstacle to the college man who desires to enter the field of physical education but whose training has been limited to athletics of collegiate grade. In other states, the college man or woman who has passed the customary gymnasium work of the first and second year of college becomes eligible for a state certificate. These are unfortunate conditions for, without question, they are to no little extent directly responsible for the misunderstanding of physical education held by some people.

The variability between states is most marked in such elements as semester hour requirements and subject matter specifications. Even in such intimate fields as health education and education the recognition of relationship to physical education ranges between extremes.

The same findings hold true for such elements as classes of certificates issued, fields covered by license, duration, requirements for renewal, among others. Identical requirements in two states may, for example, certify a teacher for elementary grades in one state, but in the other permit a teacher to work in high schools as well. Only a few states issue certificates for supervisors. In many instances, the certificate is classed as special, but not infrequently, the teacher must comply successively with the requirements for two or more classifications. Practice teaching is not required by all states. Occasionally, experience is mentioned as a prerequisite to certification in a higher class but unfortunately, the nature of the experience or the field in which it must be acquired is not specified.

Undoubtedly, the regulations of many states were established when the two year professional normal school furnished a majority of the physical education teachers. The passing of the two year course should, therefore, furnish the motif for higher standards of certification.

The relationship between courses offered at a state college or a normal school and the certification requirements of the state in which the college or school is located did not receive more than a casual study. Should there be a high correlation in this respect, its significance would depend upon the strength of the two factors, that is, the training offered and the training required. If both factors are at a high level, there would be no ground for criticism. On the other hand, if the training requirements are high and the certification standards low, that state is creating a situation

whereby it acknowledges that graduates of schools of lower standing may compete for positions on a par with the graduates of its own institutions. Obviously, this is unfair to the students of state schools and it is poor economy.

Conclusions from the Study

From the findings as noted the committee was led to establish the following general conclusions.

1. That, in general, state requirements for the certification of physical education teachers and supervisors are not adequately fulfilling the purposes of certification.
2. That present requirements are not in keeping with the accepted professional status of physical education.

Recommendations

In framing its recommendations, the committee was not guided by the regulations or requirements of any one state nor did it attempt a classified rating of the states on a basis of their standards. The neutral position seemed more suited to its purpose. Comparisons were made but only as they aided in finding a common denominator. Given that, it was possible to proceed constructively and unbiased.

A. Bases of Recommendations

The following general bases were established preparatory to formulating the recommendations. They give meaning and purpose to the suggestions offered.

It is the contention of the committee:

1. That the recognition and acceptance of physical education by the educational world is of a degree to warrant its classification with the major activities of the school.
2. That teachers and leaders with high qualifications are essential to the effectiveness of physical education.
3. That the certification of teachers by the state is regarded as sound in principle and practice.
4. That strong certification requirements are needed to protect the professional standing of the successful and well-trained teacher.
5. That state certification offers a strong incentive to professional growth.
6. That requirements for the certification of physical education teachers should be on the same plane as those for other major subjects and activities.
7. That, since physical education by the nature of its activities is subject to prostitution by skillful performers who are otherwise untrained for teaching, it is doubly essential that protection of its professional status be assured.
8. That, in view of the above points, all state departments of education should establish strong certification standards for teachers and supervisors of physical education.

B. General Recommendation

The committee believes that the principal underlying the certification of teachers by the state is sound. In accordance with that opinion, it recommends to the departments of education of the several states the adoption of standards for the selection and the certification of teachers and supervisors of physical education that will insure to physical education equal recognition with other school subjects and activities.

C. Scope of Certification

It is recommended that the regulations governing certification in the field of physical education be established to include:

1. The classroom teacher of the elementary school
2. The full-time teacher of physical education
3. The supervisor of physical education
4. The director of physical education
5. The part-time teacher of physical education

D. Value of Certificates

Certificates of different values insure protection to both teacher and employer. Accordingly, a plan is suggested calling for two grades of certificates to be issued on a basis of specified qualifications.

The two grades are:

1. Provisional—to be issued for a trial period of three years.
2. Permanent—to be issued for life after all conditions for this and for the provisional certificate have been met.

E. Classes of Certificates

It is further recommended that the two kinds of certificates—provisional and permanent—be issued, in turn, under the following classification:

1. Teacher of physical education
   a. Provisional
   b. Permanent
2. Supervisor of physical education
   a. Provisional
   b. Permanent
3. Director of physical education
   a. Provisional
   b. Permanent

The element of protection is obvious. Under this plan, the recent graduate must start as a teacher on trial, and he can advance only as he satisfies the requirements. Supervisory positions will be manned by teachers of experience and known ability. Thus, incentives to further study and training are held forth.

F. Preliminary Requirements

1. Graduation from a standard secondary school, that is, a senior high school or approved preparatory school.
2. Proof of citizenship.
3. Proof of good health and sound condition of the body.
4. Evidence of general proficiency in the activity features of the physical education program.
5. Minimum age of 18 years.

G. Professional Qualifications

As a standard for state requirements, the recommendation of the "Committee on Physical Education Curriculums in Professional Schools"[1] is offered.

The report may be ordered from Elmer D. Mitchell, Secretary, American Physical Education Association, Ann Arbor, Michigan.

Earlier studies, as well as the new certification requirements of some states, indicate that four college years or 136 semester hours of professional preparation is an acceptable minimum standard. This standard is not presented as the ideal. It represents rather the minimum time in which an individual may be adequately prepared for teaching physical education. It is the standard recommended by the committee.

The three year course or 102 semester hours is regarded by the committee as a temporary provision for

[1] **Reference:** "Report of the Committee on the Curriculum of 139 Institutions Preparing Teachers of Physical Education in the United States." Dr. J. H. McCurdy, chairman.

the indefinite period in which transition to the standard four year professional course is taking place.

The earlier studies referred to are:

1. Report of the Physical Education Committee on High School Curriculums of the Department of Superintendence, National Education Association, 1927.
2. Report of the Committee on Physical Education Curriculums in Professional Schools, American Physical Education Association, 1929.

H. Renewal of Certificates

Requirements governing renewal of certificates are favored, since it is only by some means of periodic review of qualifications that professional growth can be assured.

I. Certification by Examination

Certification by examination is not recommended. The examination conveys no guarantee of professional quality or leadership ability. It can be and very often is determined by chance.

J. Certification by Reciprocity

It is recommended that reciprocity be acknowledged by states having approximately identical standards.

K. Legislation

The committee recommends that recognition equal to that given other subjects or specialized teaching fields be accorded physical education wherever the statutes specify the subjects or fields in which teachers shall be certified.

Where blanket legislation without specific provisions is in force, it is recommended that the regulations of the state department of education accord to physical education a rank equal to that of other major subjects or activities which demand special professional qualifications and a certificate of high grade.

Teacher of Physical Education

"Teacher of physical education" is used here to mean the teacher who is engaged on a full-time basis to teach physical education in the gymnasium and on the playground. A synonymous title commonly used is the "special teacher". He is the graduate of the two, three, or four year professional normal school or college of physical education. He is a teacher and not a supervisor.

For the teacher of physical education, the following standards are recommended as desirable:

1. The preliminary requirements recommended above for all classes.
2. A class or certificate specifically for the "teacher of physical education". This is recommended above under the heading "Classes of Certificates".
3. Issuance of the above certificate in two grades on a basis of training and successful experience. The two grades are: (a) provisional; (b) permanent.

A. The Provisional Certificate

The provisional certificate is the first license. It is issued to the beginning teacher who has met all prerequisites and fulfilled all professional requirements.

This certificate should be valid for a certain period of years. The number of years should be stated in the state regulations. Three years is the recommendation of the committee.

It is recommended that the provisional certificate be renewed once for a three year period, the only requirement being proof of successful experience as a teacher of physical education furnished as specified above. In the case of renewal, the requirement should not demand that the teacher must have been employed for the entire three year period. Thus, persons deprived of employment because of illness, necessity of presence at home, or a scarcity of positions would be eligible to apply for one renewal. On the other hand, applicants for a second renewal who have had no teaching experience during the six year period but who can establish acceptable reasons for non-employment, should be required to furnish proof of graduate work in physical education or related fields to the extent of four semester hours. Failing in this, they may be issued a license to teach, equivalent to renewal for one or more years, on an agreement to fulfill the four semester hour requirement during the period of license. It is recommended that only on this basis should second renewals of provisional certificates be granted.

B. The Permanent Certificate

To be eligible for the permanent certificate of this class, it is recommended that the teacher be required by the State regulations:

1. To furnish proof of three years of successful experience as a teacher of physical education. Acceptable proof would be letters from each superintendent of schools, high school principal, or supervisor, or director of physical education, who are still living, under whom the applicant had worked during the three years. The requirement should further specify that the applicant must have been employed as a teacher of physical education for the entire three year (school year) period.
2. To furnish proof of summer school or extension course credit to the extent of six semester hours of professional work taken during the three year period. It should be further specified that such advance work must not be a repetition of courses previously taken and that it must be in the fields of either physical education, health education, safety education, or education.

After the permanent certificate is issued, it is desirable to insure professional growth of the holder by means of regulations requiring proof of accredited graduate work at stated intervals. The committee recommends a standard of six to eight semester hours every three to five years. The requirement should call for at least two such periods. Graduate work is specified since it is stated elsewhere in this report that four years or 136 semester hours of college grade, presumably leading to a degree, is the standard recommended.

Supervisor of Physical Education

A supervisor of physical education is one who devotes all or part of his time to supervising the teaching of others, whether classroom or physical education teachers.

A. The Provisional Certificate

The recommendations concerning requirements for certification as a supervisor of physical education on a provisional basis are:

1. The preliminary requirements as previously stated.
2. Holding, or entitled to hold, a permanent certificate as teacher of physical education, which means that in addition to at least three years of successful experience, the applicant has graduate credit of at least six semester hours in physical education or related fields.
3. In addition to the above credit (that for a permanent teacher's certificate), six semester hours, also on graduate level, in physical education, health education, safety education, or education.

B. The Permanent Certificate

State regulations governing issuance of a supervisor's permanent certificate should require proof of two or three years of successful experience as a supervisor of physical education. It should be further specified that testimony establishing that proof should be furnished by reputable persons such as school officials under whom the supervisor has worked.

In addition, proof of professional credit should be required. The regulations should state the amount of such credit required and the fields in which it may be taken. The recommendation suggests six to eight semester hours earned in education, physical education, or health education during the trial period covered by the provisional certificate.

Director of Physical Education

A director is one who constructs and interprets the program; organizes and administers a department; and, directs the supervisors and teachers of the department.

No specific limiting definition by which a sharp distinction may be drawn between the positions of supervisor and director is offered. One criterion is the size of the school system. Another is the type and scope of the work for which the person is employed. Perhaps the definitions given are as suitably descriptive as any. From them it is clear that, in general, the head of a physical education department of a large city school system should be a director. In small systems, the supervisor may be the only physical education specialist employed or he may be one of a small staff. The differentiation is one of function. If supervision of other teachers is expected, the state should require the one employed to hold a supervisor's certificate and it should make the engagement of a person so certified mandatory upon the employing board of education or its agent.

A. The Provisional Certificate

The following standards are recommended:

1. Holding, or entitled to hold, a certificate as supervisor of physical education.
2. Proof that an offer of a position as director of a department of physical education has been received.

Withholding a director's certificate until proof of an offer of a directorship is established will accomplish two desirable ends; first, it will prevent the securing of such a certificate for use in demanding salary increases; second, it will aid in reserving the title "director" for those actually holding positions of that class.

B. The Permanent Certificate

Standards for the issuance of permanent certificates to directors are advisable. Those governing the certification of supervisors are recommended as patterns, thus the director should be required to furnish acceptable proof of two or three years of successful experience and to show credits earned in professional study during the period covered by the provisional certificate.

The Classroom Teacher

Physical education should be one of the subjects for which an applicant for a state elementary school certificate should be required to furnish proof of his qualification.

It is recommended that state certification regulations specify the basic qualifications expected of the elementary school teacher. For minimum standards, it is suggested that the applicant furnish proof of having passed satisfactorily courses of college or normal school grade covering the following essentials:

1. Child growth and development
2. Principles of physical education
3. Organization and teaching of physical education in elementary schools
4. Practice of the physical education activities of the elementary school program
5. Practice teaching of physical education activities

The Part-Time Teacher

The part-time teacher is the teacher who is engaged to devote a certain proportion of his time to the organization and conduct of the physical education program in a school or schools, usually departmentalized, where the services of a trained, specially certified teacher of physical education are not available. In the interest of physical education and of the pupils, the part-time teacher should be one whose previous training has included preparation in the basic principles and activities of physical education.

For minimum requirements, it is suggested that the applicant furnish proof of having passed satisfactorily courses of college grade covering the following essentials:

1. Principles of Education
2. Child psychology (or psychology of adolescence)
3. Educational psychology
4. Principles of physical education
5. Practice teaching of physical education activities

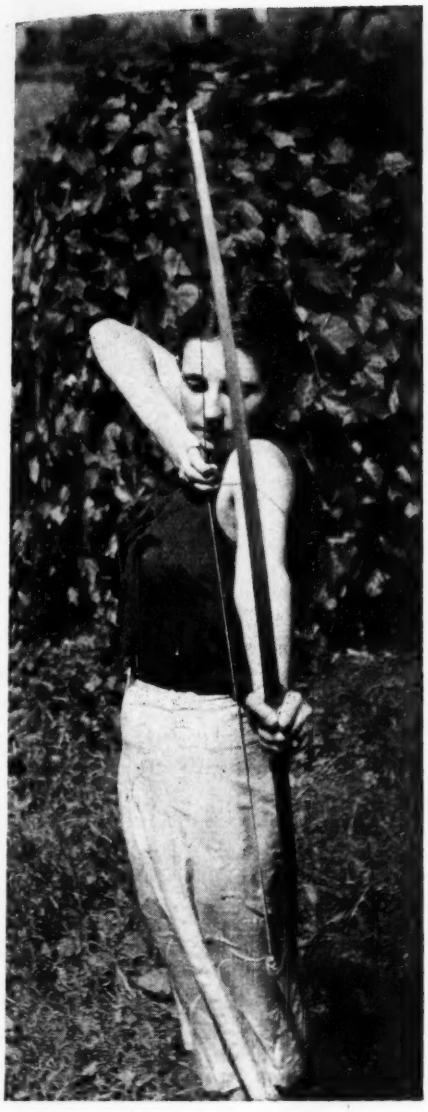
General Recommendations

To state departments of education, the following general suggestions are offered as aids to constructing certification requirements.

1. It is recommended that in naming specific course requirements, state departments of education do not use the course titles of any one institution but, instead, define carefully the nature and content of the subject-matter or the activity which the department considers as essential to effective teaching.

This recommendation is made because not infrequently the terminology of the school catalog does not accurately or completely describe the content of the

(Concluded on page 58)



2b. DRAWING
Incorrect. Elbow and forearm are in the way of the bowstring. See how the left shoulder is hunched up to the chin.

Proper Archery Technique

By

PHILLIP ROUNSEVELLE

PHOTOGRAPHS POSED BY MISS MARY HOOVER AND THE AUTHOR

2a. DRAWING
Correct position. Note bent arm with elbow out of the way of the bowstring. See how the bowstring makes a cleft in the chin.

EDITOR'S NOTE

This is the first of a series of four articles on archery by Mr. Rounsevelle, nationally known authority on the sport. Mr. Rounsevelle has also been featured in a recent short film, "Bows and Arrows," a Grantland Rice Sport-o-gram released by Pathe.

WHY is it that archery students in most schools have no conception of the real fundamentals of archery technique, in spite of the fact that good shooting is a matter of good form more than any other one thing? Is it because archery is hard to teach, or is it because of a lack of interest on the part of the students, or finally, is it because the coaches themselves are deficient in a knowledge in the fundamentals of shooting?

Archery is very easy to teach, and when properly taught arouses a great deal of interest and enthusiasm among any class of people. Unfortunately, most athletic coaches have had to study the sport as an incidental, along with many others. Few of them indeed, have had the opportunity of being coached by those who have specialized solely in archery, yet it usually requires this kind of specialization to train good archery instructors.

A properly trained instructor can teach a beginner the fundamentals in the first five or ten minutes; by that I do not mean it takes only five or ten minutes to make an archer, because that is far from being the case, but at the end of ten minutes with individual coaching, any average student begins to hit the target with regularity, at thirty yards.

During the last few years, I have been fortunate in having a large number of beginners to train under every conceivable kind of condition; some on indoor ranges, where only a few minutes were available; friends, with all the time in the world; crowded classes in schools and colleges; and, for experts, instructions on the fine points of technique; and, after reviewing all of this coaching, I feel that I can safely repeat that all of the basic fundamentals can be taught during the first ten minutes. After they are taught, there is the problem of teaching the student to coordinate these fundamentals, to keep out of bad habits, and to use judgment and develop self analysis. These are the things that require time.

What are the fundamentals of archery? Roger Ascham, in his famed *Toxophilus,* laid them down almost

1. STRINGING

four centuries ago, and they are still as good as the day he wrote them. They are:

1. Standing
2. Nocking
3. Drawing
4. Holding (or aiming)
5. Loosing

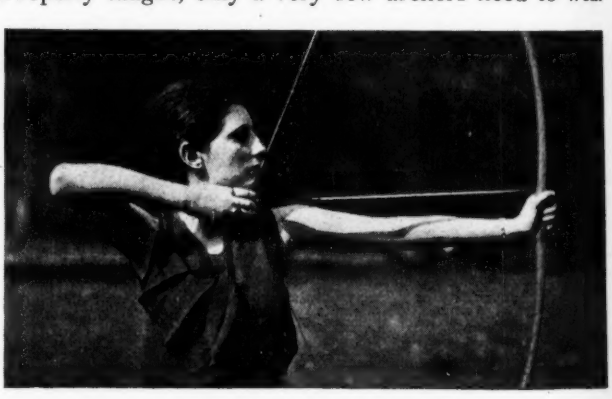
Remember that a definite technique has been developed for each one of these points which, if followed, will produce good archers, but if any one of these points is not understood or not followed, confusion and poor results are bound to ensue.

WE will start with the assumption that everyone knows how to string a bow, by placing the lower nock in the hollow of the left foot, with the left hand on the handle and the right hand just below the loop at the upper nock, and, by pulling on the left hand and pushing on the right, to slide the string into the nock. Everyone knows that the bow must not touch the ground, but must rest in the hollow of the foot. Notice in the illustration (1) that the work is done by the heavy muscles of the torso, rather than those of the wrists and arms.

Standing: The proper stand is the foundation of successful shooting. (We will assume in these instructions that the archer is right handed; for left handed archers, terms are reversed.) The stand is with the feet together, or slightly separated, well balanced, erect, and the target is at the left side. If your students have difficulty in understanding this, have them first face the target squarely, standing at attention, and then execute the command, "Right Face."

Nocking: In grasping the bow, be sure that the hand is well up on the handle, so that the arrow will slide across the wood of the bow, and will not rub across the leather or cord of the grip. Be sure that your student has the bow right side up, because the upper limb of a well made bow always bends more than the lower. If you are in doubt, look at the weight numbers on the back of the bow. When they are right side up, the bow is also right side up. The arrow should be placed on the left hand side of the bow—cock feather to the left. Of the three feathers on an arrow, two, the hen feathers, are usually of similar color and are those which slide across the bow when the arrow is released. The third, called the cock feather, stands away from the bow in a horizontal position. If this position is reversed, the cock feather will rub against the bow and deflect the arrow. Everyone is familiar with the Mediterranean draw or "loose," with the tips of the three fingers on the string, the arrow between the first and second. Unless you provide some sort of finger protection, your students are bound to get sore fingers, and develop the bad habit of flinching. Shooting tabs are only a few cents each, and have been used for centuries to prevent this very thing. Every archer should have a tab or a leather glove. Cloth gloves and adhesive tape are worse than useless. In a subsequent article, a full sized illustration of a shooting tab will be given as a pattern.

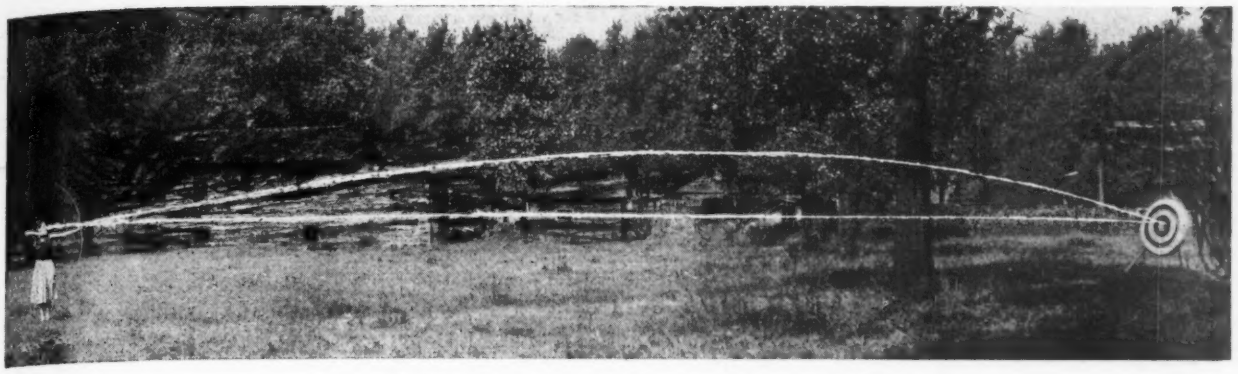
Drawing: Here is where most beginners get hurt. Properly taught, only a very few archers need to wear



2d. DRAWING

Closeup. See how the center-of-chin draw makes the string avoid injury to left breast. The Amazons were said to amputate the breast to avoid this difficulty

an arm guard. (It is well to mention in this connection that all bows should be strung at least six inches deep; that is, at least six inches between the string and the handle of the bow.) Remember this law of archery, *if your bow-string hits your arm, you are not shooting*



3*a*. POINT OF AIM—"POINT BLANK" DISTANCE

Aim is directly on gold of target. Upper line is path of arrow, lower is line of sight.

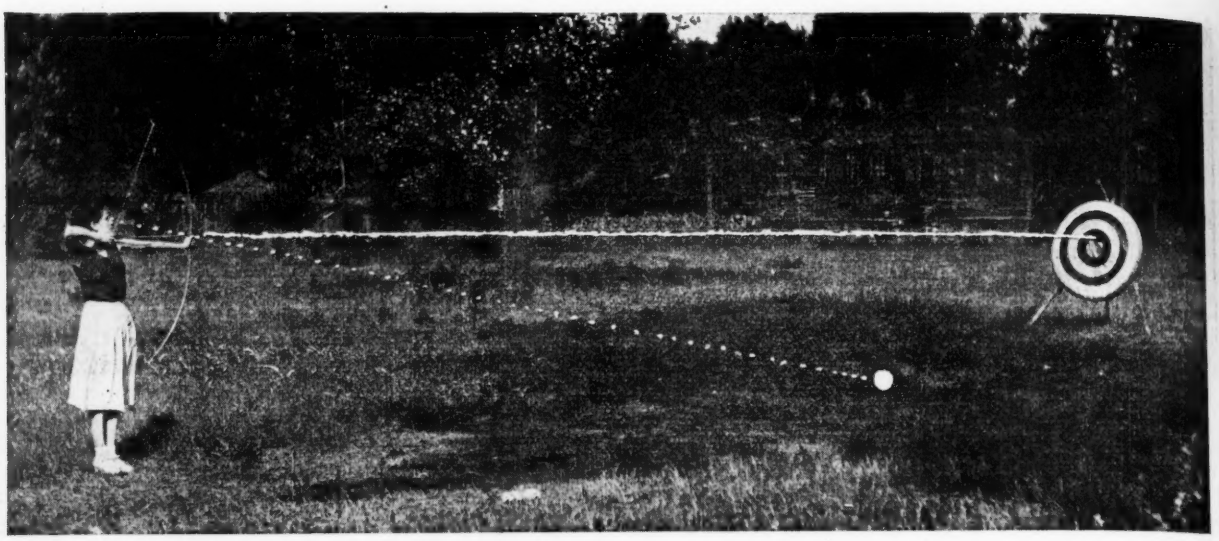
in correct form. See Illustration 2*a* taken from above, which shows the correct position of the left shoulder, arm, elbow, wrist and grip. Note each point carefully. Figures 2*c* and 2*d* are the same position taken from the side. The right shoulder is low, not hunched. You must start your beginners with light bows; heavy bows cause hunching. See Figure 2*b*. The tip of the left elbow must point to the back horizontally. Notice Figure 2*a* again and see how distinctly the arm is bent at the elbow, which causes it to clear the bowstring by a safe margin. Now compare this with Figure 2*b*, where the tip of the elbow is pointing down, and the entire under side of the fore arm is in the way of the string—sure to be hit. There is only one proper position for the shooting arm, and that is with the elbow slightly bent, as illustrated. Anything else will cause poor shooting, much pain, and possibly real injury to the left arm.

Notice how the back of the hand and back of fore arm are in a straight line, or in other words, just in the position in which a boxer would deliver a blow. Any bending of the wrist will cause shooting to the left, as in hunching the shoulder, and will also cause the bowstring to hit the arm about half way between the wrist and elbow.

It is impossible to lay too much stress upon the position of the bow arm and hand in shooting, because failure to observe the above point is what causes most of the discomfort in archery (except the finger-tips), and this discomfort in turn causes fear and a subsequent lack of interest or active dislike of the sport. Where students are shooting well and are not injuring themselves, their interest is keen and easily maintained. Watch your bow arm and you have overcome your major difficulty.

2*c*. DRAWING AND AIMING

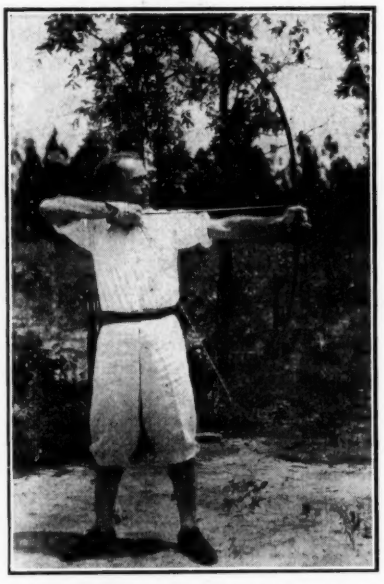
Next in importance to the position of the bow arm is that of the loosing hand. The instinctive position of this hand is always wrong and care must be taken to see that it is properly placed. Notice in Illustration 2*d* how the index finger of the right hand lies under the jaw bone, and how the bowstring makes a cleft in the center of the chin. This is known as the "anchor"; in other words, it is the spot to which you must always draw. But watch any untrained group of beginners. None of them draw to the same place twice in succession; yet to hit the target consistently, you must not change your anchor. There are many other anchors advocated, and possibly some of your students, after they become experts, may wish to change slightly. If, however, you teach every one of them to draw to the center of the chin, you will have gained a great victory: first, because you will prevent overdrawing; second, because you will help eliminate shooting to the left; and third, because you will prevent erratic shooting. If you will look again at the illustration, you will see that about the only thing the archer can do when using the center-of-the-chin anchor, is to release quickly and smoothly without jerking the hand backwards away from the face, or letting it creep forward. Uniform anchor must be maintained if consistent shooting is to result.



3*b*. POINT OF AIM—SHORT DISTANCE
Note difference in line of sight and path of arrow. See also aiming point on the ground.

All beginners have trouble with the right arm in drawing, tending to keep it pressed tight against the right side. The correct position is with the elbow high and the whole forearm in line with the arrow shaft; in fact, it is impossible to draw properly unless the right elbow is high.

Aiming: No beginner understands at first why you do not aim at the target. This is the way to explain the "point of aim" and of course, you know that the point of aim must be used if you are to expect consistent shooting. The instinctive method is not even the best for those natural good shots that you are bound to find in every group. Take the bow and arrow in your own hand and draw with the chin anchor as described before. Close your eye and hold the point of the arrow on the gold of the target at thirty yards, sighting with the right eye only. Then ask your student to get behind you and sight along the shaft, and tell you where it is going to go. Any of them can see that it will go 'way over the top. Now lower the bow hand until the student tells you that your arrow is pointing just about at the gold. Again sight over the point of your arrow with your right eye, and note the spot that your vision rests upon. Now have your student go down and put some small object, such as a golf ball on this spot, and ask the following questions:



MR. PHILLIP ROUNSEVELLE
Illustrating correct archery form

Q. When I had the tip of my arrow on the gold of the target, where was my arrow pointed?
A. 'Way over the top.
Q. When the arrow was pointing at the gold of the target, where was I aiming?
A. Where the golf ball is.
Q. Then to hit the gold of the target, where should I aim?
A. Close your left eye, draw the arrow to the center of your chin, and aim with the point of it on the golf ball.

That should give you your approximate point of aim at this distance; however, if after shooting two or three arrows, you find that they go high, move the golf ball towards you. If they are going low, move the golf ball towards the target.

Of course, as you change your distance from the target and go back to forty, fifty, or sixty yards, your point of aim will constantly get higher. At some distance, it will be on the target, depending upon your bow and arrows and other factors, and at greater distances it will be in the trees above. Notice Illustrations 3*a* and 3*b*, which show the line of arrow flight and line of sight, so coordinated that a center hit on the target will result. Judgment must be used and your point of aim elevated or lowered according to whether your arrows go over or under the target. Shooting to the right or left is usually due to faulty form, except where there is a strong cross wind.

To try to teach archery without a full and complete explanation of the point of aim, and without compelling your students to employ this method of sighting is apt to bring discredit upon your instruction. Practically 100 per cent of trained archers shoot in this way, and those who do not are considered novices or poorly trained beginners; and certainly no capable coach wants his or her students classed in that category.

Loosing: This can be covered in one simple sentence —After the arrow is fully drawn, and you have held

(Concluded on page 60)

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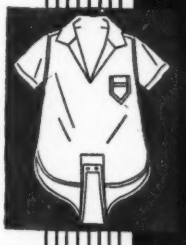

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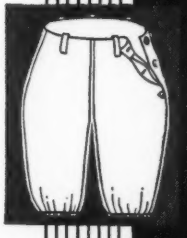

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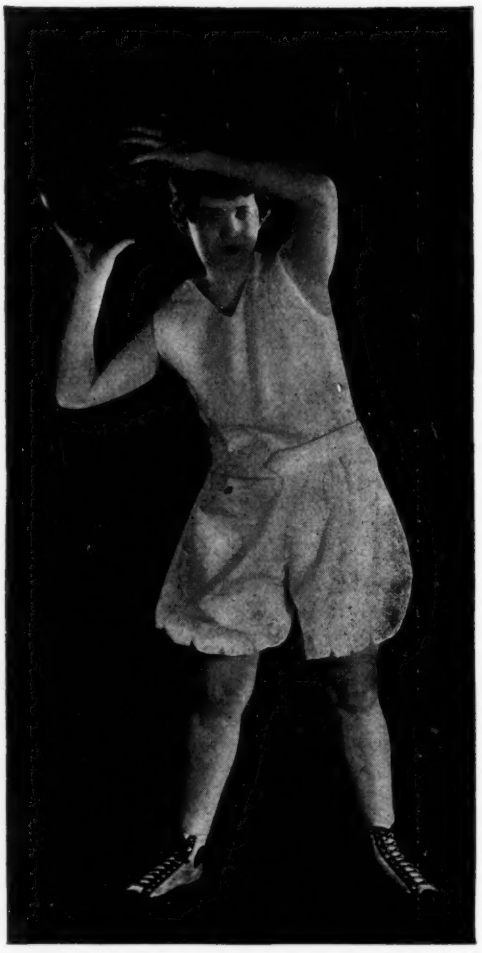

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Around the Country With J. E. Rogers

The New Jersey State Physical Education Association tendered a dinner and reception to Dr. F. W. Maroney May 17th at the Newark Athletic Club to wish him Godspeed. Four hundred guests attended. Telegrams were received from leaders in education and physical education over the country congratulating Dr. Maroney on his contribution to physical education, and on his promotion to the Presidency of Arnold College.

* * *

The Newark High Schools A. A. held its Annual Outdoor Track and Field Meet May 20th. There were eight hundred contestants representing five senior high schools and three junior high schools in the competition.

The Newark Public Schools A. A. held its Annual Outdoor Track and Field Meet May 28th. There were more than four thousand contestants. The stadium was filled to capacity. This meet was led up to by a series of sectional meets, held in various parts of the city which have proven very popular and have brought thousands of children into regular systematic athletic training.

On May 22nd the High School Girls' Play-Day was held at the Newark School Stadium, when various sports events, and exhibitional features were given by the girls from the five senior high schools. Events were not competitive in nature. It was purely a recreational and social affair. Boys were excluded, and women officials only were present.

* * *

Miss Ruth Glassow, head of the Department of Physical Education for Women at Oregon State is leaving to accept a position in the Physical Education Department at the University of Wisconsin. Her position at Corvallis, Oregon, will be filled by Miss Ruth Robinson, formerly of the faculty of the Michigan State Normal College at Ypsilanti.

* * *

Dr. Henry S. Curtis, formerly State Director of Physical Education in Missouri, has returned from the Canal Zone where he has been making a survey with Strayer and Engelhardt of Columbia University. Dr. Curtis had charge of the section on physical and health education.

* * *

The Office of Education, Department of the Interior, Washington, D. C., publishes excellent material on Hygiene, Health, Physical Education, and Recreational activities. A recent publication by James F. Rogers on Sanitation of Schools is very helpful.

* * *

Dr. L. R. Burnett, formerly in charge of recreation in Paterson, N. J., was recently appointed Health and Physical Education Director in Baltimore, Md. He is working in close cooperation with Dr. William Burdick, State Director of Health and Physical Education and Director of the Playground Athletic League.

* * *

All schools in Maryland play soccer. There are only four high schools in that state that play inter-collegiate football. Many of the women's colleges are playing soccer. It is a growing intramural game for men in colleges and universities. Several of the large cities as Chicago have soccer tournaments among the secondary schools. Soccer is taking the place of football in Junior High schools.

* * *

Speedball is a great intramural sport in high schools and colleges. Recently women's departments have shown a keen interest in the game.

Touch football is a popular fall game, especially in the fifth, sixth and seventh grades.

Dodge ball for girls is very popular throughout the country. Dodge ball is an active game demanding much team work and skill if properly played. It is one of the most popular games in St. Louis.

The Eastern Section of the A.P.E.A. will meet at Trenton, New Jersey. The Middle West will meet with the National at Detroit, Michigan. The Southern section will meet at Louisville, Kentucky. The Northwest section will meet at Spokane, Washington. All these meetings will take place in March and April.

* * *

Miss Bernice Miller of the Chicago Y. W. C. A., who is a very prominent member of the Mid-West Society of Physical Education has accepted a new position in physical education at Lincoln, Nebraska.

* * *

Dr. John Sharman, Alabama State Director of Physical Education has accepted the position as Associate Professor of Physical Education at the University of Michigan. Dr. Sharman will be Faculty Advisor to the men students in the four-year professional training course in the Department of Education, under Dr. James Edmonson.

* * *

The Department of Education, State of Ohio, has published a most valuable booklet on Girls' Athletics. It was prepared in conjunction with the State Committee of the Women's Division of the National Amateur Athletic Federation. It is a series of questions and answers in regard to the moot problems relating to girls' athletics. It is a study every administrator in physical education wants to have. Copies may be obtained from Dr. D. Oberteuffer, Supervisor of Health and Physical Education, Columbus.

* * *

Mr. S. M. N. Marrs, State Superintendent of Public Instruction, Texas, has appointed Mr. R. N. Sandlin as Supervisor of Health and Physical Education.

* * *

The Lewis and Clark High School at Spokane, Washington, has 52 acres of play space. This large tract of land devoted to sports and games was purchased by the students of the high school. The Hillyard has 20 acres.

* * *

The Alabama State College for Women, Montevallo, is building a new physical education building. It will cost $200,000, and will be fully equipped with three gymnasiums, swimming pool, three class rooms, offices, locker rooms and showers. This physical education building will also serve as field house because it is adjacent to the sport fields. The faculty is:

Ruth Andrews, Director (resigning), Alfreda Mosscrop (new director), Elizabeth Britton, Margaret Grayson, Mrs. Miles Hardy, Edythe Saylor.

Miss Andrews has done a fine piece of work during these past years. This coming year she will be succeeded by a new director, Alfreda Mosscrop of the University of Wisconsin.

* * *

Thomas E. McDonough, head of the Department of Physical Education, Eastern Kentucky State Teachers College, Richmond, has been doing a splendid piece of work in that state developing the physical education program. Plans for a Health and Physical Education building at the College have been approved and construction work is under way. The building will be an unusually attractive one. It will be a three story brick and stone structure, housing two gymnasiums, handball courts, boxing and wrestling rooms, swimming pool, locker rooms, offices, classrooms and laboratories. Two spacious athletic fields, including a gridiron, soccer and hockey fields, hand surfaced tennis courts and a five lap track are under construction at this time.

Eastern is also inaugurating a four year professional course in Physical and Health Education, beginning Fall 1930. Intramural and intercollegiate athletics, health service and teacher training facilities are ample to take care of the physical needs of all students.

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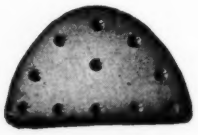

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Popularizing Correctives

By Edythe Saylor

Associate Professor of Physical Education, Alabama College, Montevallo, Alabama

CORRECTIVE Gymnastics! Cripp Gym! Puny Gym! What a stigma the name often carries among the seemingly healthy girls who are advised to take it, and would much rather be playing hockey or taking clogging or tumbling. It is true that there are a few girls who admit that they are interested in trying to get their feet back to normal, in curing their functional disorders, or in having a straight back; but more of them, to judge from what they say, want to be having a good time, and not be "laid on the shelf," as it were, by physical disabilities which they do not consider handicaps. Radiant, dynamic health is much desired by everyone, but unfortunately too often is not sought because it might mean doing something the girl does not want to do.

With all this in mind, the corrective classes at Alabama College this year have aimed to make class work popular, to have a good time, and, at the same time, to correct defects. Credit was given for corrective just the same as for other physical education classes, and no one, excepting the heart cases and very weak girls, was debarred from electing other classes or after-school sports.

The girls taking corrective work were divided, as far as schedule would permit, into a foot class, a constipation and dysmenorrhea class, and then a number of classes composed of girls with scoliosis, combinations of several things, infantile paralysis cases, and other cases needing individual work. This division was based both upon the college physician's examination and the physical examination; and all cases were gone over carefully with the physician from time to time. The foot class was given group exercises of all sorts and played numerous foot games which will be described later.

Everyone in the constipation and dysmenorrhea class was, for the most part, given the same abdominal exercises. The girls always sang at the top of their lungs while doing the Mosher exercises so that breath control would take care of itself and let the muscles do the work. Everything from "It Ain't Going to Rain No More," done as a round, to "Chang," was sung, and some of the girls became so interested that they were constantly learning new songs. Bicycling was fun when we started slowly and gradually went up the hill faster and faster; or when we sat up facing a partner, soles of feet together, and alternately flexing knees. In doing knee upward bending, stretching, and slow sinking, either single or double, from a lying down position, we raced to see whose feet would be the last to touch the floor. It was much more fun to do trunk raising from the floor if we could sit on our partner's feet while she did the exercise. Of course, only part of the hour was devoted to these exercises, the rest being spent in games or folk dancing.

The class period for the classes in which individual work was given, was divided into three parts—a general warming up period, then individual exercises, then group activity. In the general warming up period, all sorts of exercises and stunts were used. The Danish coordination exercises often made us all stop to laugh with each other at our queer attempts to perform them, but nevertheless sent the girls to their rooms with new stunts to practice and show their less initiated roommates. Exercises and stunts that could be done with partners seemed to be very popular. For example: we stand back to back with locked arms and stand up and sit down; we face each other, hands grasped and toes touching, and sit down and stand up without moving our feet; we see-saw, sit with hands joined, and straighten our knees in front of our faces; and do anything else we can think of together. "Beans Porridge Hot" is great fun when clapped out with the feet. Also all sorts of simple exercises done in uneven counts which surprise the pupil and keep her alert, are popular. After five or ten minutes of this sort of thing everyone is calling for more open windows. Then the individual exercise cards are distributed and each girl does her own exercises, which are changed as the year progresses.

Whenever two girls having the same difficulties happened to be in the same class, they were encouraged to work together, and several strong friendships have developed in the classes this year through the sharing of exercise cards. It is not an uncommon sight to have half the class on the floor at once doing "Mosher" and singing lustily. Usually girls with unlike curves like to creep together so that they can more easily look at each other and converse when stretching their legs and arms. Each girl, of course, goes at her own pace and may rest as much as she likes.

Throughout all the classes a girl is always encouraged to do as much of the work as she feels that she can do, but at the same time to feel the utmost freedom about sitting or lying down when she likes. By playing fair with the girl, she usually does not take advantage of the teacher. If she does, she misses a good time and it is her hard luck. Every opportunity is seized to encourage the girls to do their exercises every day in their rooms. Although no definite check is made on this, numerous reports have come in that exercises are being done regularly.

A person watching a corrective class would probably be impressed by the way the girls have learned to take care of themselves. On several unavoidable occasions

(Continued on page 52)

Elementary Team Play in Soccer

By John D. Brock

Secretary of Physical Education Department, Springfield Y.M.C.A. College

ASSOCIATION football, or soccer, as it is more commonly called now, has become a great international game. From humble beginnings it has spread all over the earth. It has been suggested that the first soccer ball was a man's head, and one can imagine the sportive instinct that demanded a head for play, or the natural outlet of impulsive action against a fallen foe. Later a stuffed pig's bladder was used. The participants consisted of undisciplined crowds. From these natural beginnings the game has grown steadily. All the nationals of Europe play it; the Oriental countries play it splendidly; and South America is producing world champions, notably the Uruguayans. The game has had a gradual but marked growth during the past twenty-five years in the educational institutions of this country. Introduced early by the English and Scottish immigrants, it was confined largely to these groups until recognized by the educational institutions as, first a good intercollegiate sport, and later, as a fine addition to intramural contests. It was introduced into a few of the universities and colleges of the East about 1907. Springfield College early saw the need of this game from the teacher training standpoint and by 1908 was playing with Columbia, Yale, and Princeton, and filling out the schedule with local teams composed for the most part of Scotchmen from the factories. From the colleges the game has spread to the secondary and elementary schools. In some instances it has been used as a varsity sport, but its greatest contribution has been in intramural sport, where it lends itself so readily to the recreational and educational idea. Large audiences have not been necessary to promote interest. Participants have played the game because they like it; it satisfied play needs in a rational way.

The game, although requiring a high order of technique, is simple enough in its team play to be easily understood. Highly specialized coaches are not required. Several of the very successful coaches in the East have not been soccer players and knew little of technique or team play when they were asked to take over the duties of coach. Great variety in plays is possible, but the game can be played with a limited number of plays, thereby lending itself to a fair degree of team play with little experience.

INDIVIDUAL technique is the basis on which good play results. America has not yet become football-minded as has Europe. Our youth as a group throw a ball more naturally and with greater effect than any other nationality. America desires to use its hands on a ball. Observing boys in Switzerland, France, England and Scotland, recently, the writer could understand clearly why their individual technique in footwork is better than ours. Small groups of boys could be seen any day in Geneva kicking a small rubber ball, a small stone, or other adaptable object, in the streets, parks or school grounds. The unusual spectacle to an American in a Scottish village of a young man keeping his cap skilfully in the air by alternate kicks was so common and its motive so understood by the natives that it was unheeded. We have not developed this football-mindedness that will use anything available upon which to work its skill. In Europe soccer has become the game of the masses. This is because of low cost to the player. In France during the World War in the more advanced areas it was found quite impossible to get the equipment for rugby football for our American soldiers, but a pair of pants cut off above the knees, an old pair of shoes taken to the village shoemaker and supplied with cleats, the regulation army shirt, and one football, and we were off for a match with the British, the French or some interned Russians.

There are many interesting features of the game that could be presented — technique, pedagogy, team play. The limits of this article will not permit the thorough discussion of technique, although growing interest and joy in the game is based upon the acquiring of adequate personal skill. Rather the discussion will be confined to a few principles of pedagogy and team play.

A TEAM cannot develop an attack until individuals have developed enough technique to pass the ball where they wish it to go and impart to it the force that makes it easily handled by a team-mate. To make the development of technique interesting simple games can be organized to aid in getting this ability. Suggested games are: "touch ball" played with the feet instead of the hands; keeping the ball in the air by heading on a time or count basis and with groups of three to eleven players participating. There are many such games adaptable to developing soccer technique as well as interesting in themselves. Contests which time the ability to dribble around obstacles, and which test the ability to kick and head the ball for distance and accuracy, are examples of many types of competition which can be worked for individual or group scoring.

One of the great difficulties of a coach or teacher is to develop a team that can score when they get within scoring distance of the goal. This lack is especially marked with inexperienced players. Even with ability to control the ball well individually and as a team without opposition, when opposed the team usually lacks scoring "punch." The line of pedagogy best suited to develop ability and confidence is:

First—Develop scoring ability with stationary balls at various distances.

Second—Develop scoring ability with ball coming toward kicker or header.

Third—Develop ability to score when ball is moving away from kicker or header.

Fourth—Develop power of scoring with inanimate objects as obstacles. The importance of this part is very great for inexperienced teams and warrants attention and time to develop psychologically satisfying obstacles. Ingenious devices can be utilized to represent opponents. A goal keeper is advisable. The goal also should be supplied with a net where possible. The ball is dribbled a short distance and a shot for goal is taken just as the individual reaches a desirable spot. The shots should be varied, receiving from in front, behind, from the sides, and on left and right foot. The value of the training consists especially in timing body and ball and kick while moving for a certain place from which to shoot and in developing the habit of kicking accurately and with power through chosen spaces from either foot and in any direction. (If men are used against undeveloped players timidity usually results, and this means light tapping of the ball because of poor bodily mechanics.) Added to this method of course would come the usual running and passing practice for timing and acquaintance of ability and habits of team mates with the working out of attempts at definite plays.

THE choice of what type of game to play will depend a great deal on the ability in technique of the individual players. Several types of games have been evolved. These may be discussed under two main headings:

I. The direct attack.
II. The indirect attack.

The various types of games may further be given as:

1. The overhead game.
2. The delayed passing game.
3. The quick passing game.
4. The dribbling game.
   a. Combined with other types.
5. The short passing game.
   a. Direct attack.
   b. Indirect attack.
   c. On ground.
   d. Overhead.
6. The long passing game.
   a. Usually overhead.
   b. Direct and indirect attacks.

Various combinations of all these types may be employed.

These types have been combined by various teams and with expert players a team may be developed that can change its style to suit the opponents or the stage or situation of the game. With the average high school team, college team, or in intramural matches, in this country, it is usually necessary to select a single type of game or at most a combination of two of the above, and drill thoroughly in this limited choice.

Indirect Attacks, except as developed down the wings to draw opponents away from the goal, are only indulged in by experts who can control the ball easily. For instance, in an attack coming down one wing the ball is passed from one side to the other several times before the attempt is made for the goal (this in order to draw the opponents, if only slightly, out of position).

THE *Direct Attack* is the best method for beginners. It consists of going straight down the field by dribbling, long or short angle passes, or long kicks; or by passing, dribbling down a wing and shooting, when near enough, directly for the goal; or making a long pass to the center of the field near the goal for the two inside forwards and the center to concentrate and head or kick the ball for a score. Even this simple and elementary method of attack involves skill of a high order and is used frequently by expert teams.

The *Short Passing Game* is developed on the ground for the most part (long passing on the ground involving greater ease of interception by the opponents). This style involves greater ability of the players to handle the ball and pass with precision and speed to certain definite spots. It involves "triangle" play—getting the opponent in the center of a triangle. Often back passing is used—an unprofitable play for beginners but indispensable for advanced play.

The *Long Passing Game* is usually indulged in by beginners. In its most elementary form it is simply blindly booting the ball as far as possible toward the opponent's goal, with the hope it will stay in and fall in the path of a team mate. In its advanced stage this style is a brilliant, quick method of advancing and getting opponents out of position, leaving them little opportunity to concentrate in the vicinity of the goal, or to preserve a good arrangement for defense. Opponents cannot intercept so easily a ball passed in the air.

The *Dribbling Game* is indulged in by the individualist type of team, but even in high class play, in its proper place, where a player is free, it has its usefulness in the modern game. These occasions arise where a man gets away from the mass of his opponents, gets behind them, and there is the possibility of dribbling past any remaining opponents. It also has its place in drawing opponents to put them out of the next play and here has its relation to the delayed passing game or indirect attack.

The *Quick Passing Game* is used to lead constantly to put opponents out of position. Retaining the ball for any appreciable time gives opponents opportunities to organize their defense. This type of passing is particularly good when in the opponent's half of the field.

THE *Overhead Game.* Some teams do little heading of the ball, others develop the policy of keeping the ball in the air as much as possible and heading wherever possible. If the wind is in one's favor the overhead game is suggested; if the wind is strongly against one the short ground pass is generally best.

High class, present-day teams develop all these practices. There has been a tendency to develop quick attacks. Most colleges and high schools develop direct

(Concluded on page 58)

"Tag" Speedball - - a Running Game

By A. S. Hotchkiss

Director of Physical Education, Tennessee Coal, Iron and Railroad Co., Birmingham, Alabama

"TAG" Speedball has developed because there was a well defined demand for a game that allowed running with the ball along with all of the other splendid features of regular Speedball. Points which at first seemed to present objections have steadily vanished under playing conditions. There is no more body contact than in Basket ball or Speedball. Small or large players and even players varying considerably in age play safely without special equipment. Running with the ball has added a number of additional natural skills, many of them extremely useful; dodging, sidestepping and various types of footwork and change of pace, and along with this has come a host of new game situations which brings joy to the players as well as to the spectators. "Tag" Speedball is filling a long felt want for a fast outdoor, running, kicking, throwing team game for boys and young men.

For those players and leaders who are already familiar with the regular Speedball rules, it will only be necessary to cite and explain the changes made necessary by allowing running with the ball.

These changes are as follows:

CHANGES TO ADAPT SPEEDBALL RULES TO "TAG" SPEEDBALL

Page 42, Rule IV, Scoring, Section 1:

Add: Touchdown from run across goal line—two points.

Page 43, Rule IV, Section 3:

Add: A touchdown may also be scored by a player running across his opponents' goal line with the ball in his possession without being tagged until across the goal line.

Page 45, Rule VI, Section 1:

Change 7th line to read "Kicked, run with, or played as an overhead dribble, at option."

Page 46, Rule VI, Section 3(b):

Change line 4 by omitting the word "not," the sentence to read: "He may score a touchdown by this method."

Page 46, Rule VI, Section 6:

Omit entire section 6, as this rule in the book prohibits carrying the ball; this rule to read:

New "Tag" Speedball Rule VI, Section 6:

(a) A player when catching a fly ball from a kick or pass may take as many steps in any direction as he pleases.

(b) A player, with the ball in his arms or hands, who while advancing the ball by running is tagged by an opponent, above the knees, *shall forfeit the ball to the opponents at the spot where he was tagged;* the tagging side in turn shall put the ball in play by a free kick in any direction at this point within five seconds, and the opposite side shall remain ten yards away from the ball or remain out of the play until it is kicked."

All of Rule VI, Section 9, regarding a Free Kick is in force on this play with the exception as stated in the new Section 10 for "Tag" Speedball.

Rule VI, Section 10 (New for "Tag" Speedball only):

When a defending player is tagged between his own ten yard line and his goal line, the ball is placed at the point of tag and the defending players are allowed to line up on their goal line at will, or otherwise remain at least ten yards away from the ball until it is kicked. If preferred, the regular Speedball rule for a technical foul by defenders in this area may be followed; that is, a penalty kick for goal. (Rule VIII, Section 3a.)

Page 48, Rule VII, Section 2:

Minor technical fouls—Omit 1: "Carrying the ball" or change to read "Being tagged while carrying the ball."

All of the plays possible in regular Speedball are still a part of "Tag" Speedball and in addition the running feature provides for extremely interesting fast team play in combinations of throwing, catching and running as far as the defense has openings and then there are the several choices of dropping the ball to the ground to be dribbled by the ball carrier's feet, or of drop-kicking or punting, or of tossing for an overhead dribble (once) to the player himself, or of throwing to a team mate. For scoring, the ball may be carried up to the goal opening and there kicked off of the ground between the uprights and under the bars for a three point score, or passed into the end zone to a team mate for two points, or drop-kicked over the bar for one point, or run across the goal line anywhere between the sidelines for a touchdown, a two point score.

The running feature, therefore, adds another scoring threat and seems to open up the defense and consequently all kinds of new situations arise for both offense and defense.

The player running with the ball is stopped by being tagged anywhere above the knees, (to avoid tripping) and the ball is immediately placed on the ground at the spot of the tag and the tagging side has a free kick with opponents ten yards away, with five seconds allowed for the play. This gives about the same amount of stop in the game as a toss-up in basketball. The "tag" feature, therefore, does not slow up the game; if anything, the running creates many rapid changes, impossible otherwise.

A provision is necessarily made on a tag of a defender player occurring near his goal which allows opposing players to be closer than ten yards on the free kick which follows. When the defending team is tagged within the ten yard line (that is between the goal line they are defending and the 10 yard line) the defending players are allowed to line up with their feet on this goal line. If this provision were not made the defending players would have to line up ten yards away from the ball (or behind their goal line) and the resulting free kick would almost surely result in a three point score. The above possibility is therefore the reason for the exception and is of real importance only when the defending player happens to be tagged near the goal posts. A simpler option on this play is to award a penalty kick to the offense; this is in accord with the regulation Speedball rules covering a technical foul by defenders in their own penalty area (See Rule VIII, Section 3a).

At first glance it might appear very difficult to offici-

(Concluded on page 60)

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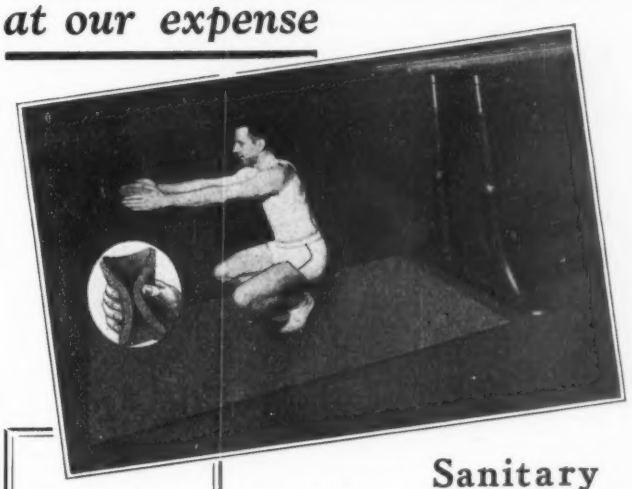

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Beeball - - *Combining Football and Soccer*

By Clarence W. Beeman

Athletic Director, Mackenzie High School, Detroit, Michigan

Beeball is a modified football game combining the most interesting and recreative values of football and soccer.*

Ball: The game is played with a round leather (rubber inflated) ball slightly smaller in circumference than a soccer ball, 22″ to 23″, weight 12-14 ounces.

The Field: Maximum dimensions are the same as the football field (160′ x 360′). The game is, however, very adaptable to smaller school yard spaces. Five yard lines plainly marked are a decided asset in the conduct of the game.

The Goals: The goals are two posts with cross bars on top placed in middle of the end lines. Regulation posts are 8 yards apart with the cross bar 8 feet above ground.

Players: A regulation team is composed of nine players: four (4) forwards, four (4) guards, and one (1) goal guard. The chief function of the forwards is attack; that of the goal guard and guards, defense. However, at any stage of the game a guard may become an attacking player and a forward a defensive man, etc.

The Game: The game consists of two 20 minute halves which can be shortened by mutual consent. The game begins by a kick-off from midfield and the ball must travel at least 10 yards. All opponents are 10 yards from the ball at the kick-off. If kicked out of bounds, it is awarded to the opponents at the spot where it last crossed the field of play. After the kick-off, the ball may be touched, batted, kicked, or run with as follows:

(a) The ball may be kicked at any time except when it is declared dead.

(b) A ball may be touched with hands or batted, but before being touched or batted again, it must be touched by some other player (team mate or opponent).

(c) Any player may run with the ball if he catches a "kicked fly ball" (same as running back a punt in football).

(d) A player may pick up and kick a rolling or bouncing ball.

(e) A player who is running with the ball and is forced out of bounds, shall be awarded a free kick at the spot where he was forced out.

Legal Tackle: A legal tackle is made whenever a player who has possession of the ball is touched with both hands of an opponent—one hand must be placed on back and one on chest. (Referee will blow whistle, ball is dead).

Free Kick: A free kick is declared following a legal tackle or foul of any kind; the player tackled is awarded the kick which he makes by placing the ball on the spot designated by the referee. All players must remain at least 5 yards from the ball until the kick has been made.

Corner Kick: A corner kick is declared whenever the ball goes out of bounds through the end zones, provided it was last touched in the field by one of the defending side. The attacking side is then given a free kick from the corner kick mark.

Touchback: A touchback is declared whenever the ball goes out of bounds through the end zones, provided the ball is not touched by anyone on the defending side. The defending side is then awarded a free kick from the touchback mark.

Fouls: (*a*) *Personal.* A player shall not hold, push, charge, or use unnecessary roughness, whether or not either player has possession of the ball.

Penalty: Free kick to opponent at spot of foul. Personal foul is charged against player; three (3) fouls disqualifies him.

(*b*) *A technical* foul is committed whenever a player bats or touches a ball successive times (before it is touched by an opponent). Throwing the ball is a technical foul.

Penalty: Free kick to any one of the opponents at spot of foul.

(*c*) No ball may be picked up in the end zones. Ball must be played as a ground ball as in soccer.

Penalty: Free kick to opponents at touchback mark.

Scoring: Field goal—1 point. (Ball kicked underneath crossbar.)

Safety—2 points. (Made whenever a player of the defending side having the ball in his possession is legally touched in his own end zone.)

Touchdown—3 points.

Whenever any player of the attacking side *after catching* a *"fly kicked ball"* runs across his opponents' goal line.

Whenever a player of the attacking side catches a *"fly kicked ball"* anywhere in the end zone. (This cannot be be scored on a ball kicked in from out of bounds).

Officials: A referee and an umpire. The referee has general charge of game. The umpire should keep on opposite side of field from referee. The umpire should be provided with material to note all fouls (personal) against players and to keep the score.

*Mr. Beeman is the originator of this new game for the fall season. Complete Rules Book may be obtained from the American Sports Publishing Co., New York City.

Practical Hints on Playing and Coaching Beeball

1. All players on either defense or offense should be coached to catch kicked fly balls and run them back.

2. When a catch is doubtful (players of both teams near the ball) it is advisable to bat the ball to the ground and kick it out of danger.

3. Players should be particularly coached *never* to throw the ball. This is a costly foul, as the opponents secure the ball for a free kick at the spot of the foul.

4. When a player has been awarded a free kick his team mates shall *spread quickly* over offensive territory.

5. Defensive men should likewise cover every available opponent when a free kick has been awarded against their side.

6. Coach the players to make a clean tackle by placing both hands on a runner, as specified in the rules. No pushing or holding of the ball carrier is allowed.

7. Players should be encouraged to pick up and kick every loose or rolling ball (except in end zone).

8. Encourage picking up the ball, pivoting and kicking, to get the ball away from a crowd of players.

9. A player running with the ball, before being tackled, may stop and kick the ball. This play will facilitate teamwork.

10. Running the ball back from behind your own goal line may prove costly. A safety often may be avoided by batting the ball to the ground and kicking it out of danger.

11. Encourage *all players,* whether forwards or guards, or even goal guard, to run with the ball.

12. Kicking the ball back and across the field to prearranged positions will help teamwork.

13. The ball is always in play while in the end zones until a score has been made, or the ball kicked or played out of danger. Do not pick up a loose ball in the end zone.

14. For gymnasium classes wearing the regulation costumes, it will be advisable to have one team wear some distinguishing mark. A 10-cent colored bandana handkerchief, worn pirate style, makes a cheap and effective uniform.

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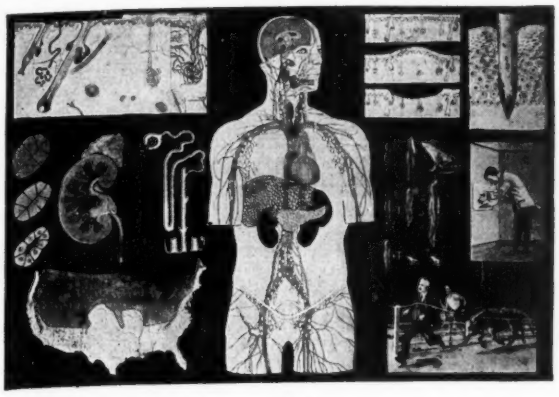

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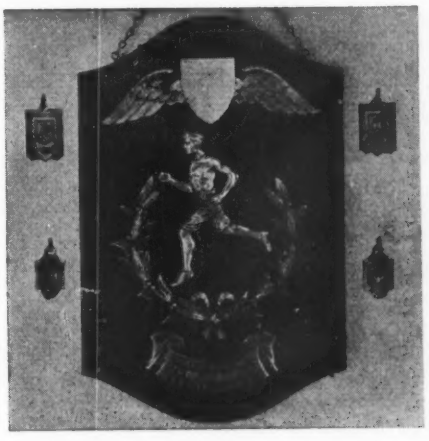

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New Rules for Touch Football

By HOWARD B. ORTNER
Director of Intramural Athletics, Cornell University

The following Touch Football rules have gone over big at Cornell University. Not only do the 35 fraternities play this game, but every small lawn has groups playing along the same line.

These new rules seem to avoid all the rougher elements of football and still offer a vigorous game needing little equipment. Touch football should make an ideal Junior High School game, especially in schools where regulation football is not allowed.

RULE I
Field

SECTION I—(a) The maximum length of the field shall be (75) seventy-five yards; the maximum width (50) fifty yards.
(b) The minimum length of field (50) fifty yards; the minimum width (40) forty yards.

SECTION II.—There shall be no end zone or goal posts.

RULE II
Players and Substitutions

SECTION I—There shall be eleven (11) men on a side. By mutual agreement team may play with seven men.

SECTION II—The positions of the players are the same as those on a football team.

SECTION III—Any number of substitutions may be made during a game at any time.

(*Note*)—Substitute must report to referee before entering game.

SECTION IV—No regulation equipment is necessary, but it is deemed advisable to wear football, soccer, basketball shoes or tennis sneakers.

RULE III
Length of Game

SECTION I—The length of the game shall be forty (40) minutes; divided into two (2) twenty (20) minute halves.

SECTION II—Three (3) time outs during a half are permitted.

SECTION III—There shall be a rest period of five (5) minutes between halves.

SECTION IV—There shall be no extra period at the end of the game in case of a tie score except when mutually agreed upon by the captains of both teams and referee.

SECTION V—Team failing to appear within ten (10) minutes after appointed time shall forfeit the game.

RULE IV

SECTION I—The kick-off is to be made fifty (50) yards from the defending side's goal line. (*Note*—Kick-off must be made from this point to eliminate the ball going over the defending side's end line on most of the kicks.)

SECTION II—Ball out of bounds on kick-off shall be tried second time from same point. If out of bounds second kick, ball goes to opposing side at point where ball went out.

SECTION III—Ball rolling over end line on kick-off, as on any other kick, shall be put in play on twenty (20) yard line by team receiving ball.

RULE V
Scoring

SECTION I—There shall be no scoring through kicking the ball.

SECTION II—Six (6) points for a touchdown.

SECTION III—Two (2) points for a safety.

RULE VI

SECTION I—There shall be no tackling of ball carrier, passer or kicker. (Penalty, 15 yards).

SECTION II—The man carrying or having possession of the ball is down where touched by an opposing player.

SECTION III—There shall be no violent or strenuous blocking; i. e., defensive or offensive player leaving his feet to take out a man. Exception—blocking in line of play. (Penalty, 15 yards).

RULE VII
Downs

SECTION I—There shall be four (4) downs to cover distance of ten (10) yards. If distance is not covered in four (4) downs ball goes to opposing side at point of final down.

RULE VIII
Forward and Lateral Passes

SECTION I—There shall be forward and lateral passes. The rules governing these to be the same as regulation football rules. With these exceptions: (a) A forward or lateral pass may be made from any point back of the line of scrimmage. (b) There is no penalty for two successive incompleted forward or lateral passes.

SECTION II—Every man on a team shall be eligible for a pass with the exception of the two guards and center.

(*Note*)—The two guards and center may change positions with any men on the same team so that they may participate in the reception of passes during a game. These changes must be reported to the referee before being made.

SECTION III—There shall be no time out for incompleted forward passes.

RULE IX
Kicking

SECTION I—The offensive side may punt, place kick or drop kick at any time.

RULE X
Free Catch

SECTION I—There shall be a free catch of punt, drop kick or placement. The receiver shall signify his intention of a free catch by raising his hand. The player shall be allowed one (1) step after ball is caught.

(*Note*)—Penalty for violation of this rule shall be five (5) yards from spot where ball was caught.

RULE XI
Dead Ball

SECTION I—A ball is deemed dead after a dropped punt, drop kick or placement or upon an incompleted forward or lateral pass.

SECTION II—A ball is dead outside field of play.

SECTION III—At all other times ball goes to side recovering at spot of recovery.

Penalties

(1) Offside—5 yards.
(2) Tackling, roughing passer, kicker—15 yards.
(3) Delaying game in any way—5 yards.
(4) Unsportsmanlike conduct—out of game.

Officials

(1) REFEREE. There shall be a referee who will have absolute charge of the game. His decisions will be final and not to be disputed by any member of either team with the exception of the two captains.

(2) LINESMAN. There shall be one linesman who will act in the same capacity as head linesman in a regular football game. He shall also be timekeeper.

Any plays or questions arising during play not covered herein shall be governed by regulation football rules.

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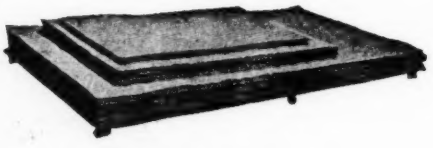

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Solving Gymnasium Storage Problems

By D. V. Trapp

WHEREVER and whenever a gymnasium is built, an old one remodeled, or equipment purchased, there are a number of perplexing problems of storage which must be met and solved. To provide adequate facilities for the storage of pupils' and students' clothing, gymnasium apparatus, games and sports equipment, etc., at an economical cost requires in the majority of cases the knowledge and experience of a "storage specialist."

The Athletic Coach or Director is a specialist in his or her line, and is usually so busily engaged with regular duties that very little time is left for him to devote to an exhaustive study of the how's, why's and wherefore's of storage.

To assist those who are devoting their time to health and physical education to a better understanding of the many problems involved in planning, specifying, and obtaining of efficient, and at the same time, satisfactory and economical storage equipment that is needed in connection with the modern gymnasium, the information and illustrations presented in this article may prove useful.

The Material to be Stored

The material which presents itself for storage in connection with a modern gymnasium can roughly be placed in two classes: namely, No. 1—Sports and Games Equipment; and, No. 2—Clothing.

Class No. 1, Sports and Games Equipment would include such items as Indian clubs, dumbbells, footballs, basket balls, hand balls, volley balls, base balls, gloves, bats, masks, protectors, helmets, baseball and football suits, and the various other items which would be used in the Physical Education and Athletic pursuits of the students.

Class No. 2, Clothing, would include clothes of the pupils and students such as top coats, street suits, hats, dresses, street shoes, gymnasium suit, bloomers, gym shoes, swimming suits, etc.

For items which fall in Class No. 1, the modern storage cabinet is available to provide the most efficient storage.

For the storing of items under Class No. 2, we first think of the steel lockers, with auxiliary equipment such as steel basket racks and trucks, wire baskets, benches with pedestals, etc.

Steel Storage Cabinets

The storage cabinet which is to be of the greatest value in connection with the Physical Education activities should be the one which possesses the greatest number of features of convertibility for the various storage applications.

Figure 1 illustrates a cabinet shell; or, in other words, a cabinet without any interior equipment. This shell is so arranged that a large variety of interior equipment parts can be placed inside to store the thousand and one items that are regularly used in connection with gymnasium activities. A close examination will show that there are slots in both the left and right front and rear corners which permit the attaching of shelves. These shelves are so constructed that it is only necessary to tighten a wing nut or loosen it in order to hold the shelf securely in place or to remove it. The slots are on 1″ centers, and the shelves can be moved up or down, to take care of items of various sizes. These features of adjustability should be given careful consideration in the purchasing of storage equipment.

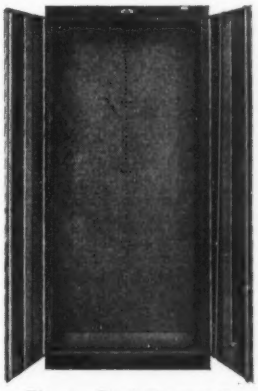


Fig. 1—Steel Storage Cabinet (shell only) without interior equipment.

In addition to the storage shelves which can be placed in this cabinet shell, a variety of other equipment parts have been arranged to engage in the same slots and with practically the same features of adjustability. Figure 2 shows a plain storage shelf. These storage shelves can be had in a variety of sizes, that is, width and depth to fit in the different sizes of cabinets that may be required.

Fig. 2—Plain adjustable Storage shelf.

Figure 3 displays a storage cabinet arranged with four adjustable storage shelves. This cabinet is used in a High School at Gloversville, New York, for the storage of football suits, etc.

Fig. 3 — Storage Cabinet equipped with plain adjustable storage shelves.

For the storage of balls of various types and descriptions, a shelf arranged with a flanged front as shown in figure 4 ideally meets all requirements. This shelf has all the features of adjustability offered by the plain shelf and in addition is so arranged that rolling items stored in the cabinet will be kept on the shelf instead

Fig. 4—Adjustable Storage shelf with flanged front.

of rolling to the floor each time the cabinet doors are opened.

Figure 5 displays a plain storage cabinet equipped with flanged shelves which is used for the storage of various sorts of material that could not be handily stored in a cabinet with shelves other than with a flanged front. A few or as many shelves can be placed in this cabinet as requirements necessitate. These shelves are adjustable, a feature of considerable importance in the gymnasium, where numerous articles of different sizes need to be kept.

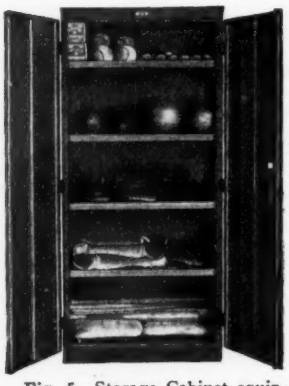


Fig. 5—Storage Cabinet equipped with storage shelves having flanged fronts.

Figure 6 is an illustration of a specially designed rack that fits in the cabinet shell the same way as the plain or flanged shelves. This rack is so constructed that it will store nine pairs of Indian clubs, or dumbbells. The rack can be adjusted up or down the same as a shelf, and as many or as few of the racks can be placed in the cabinet as required. For example, one rack can be used to the shell, with a combination of plain or flanged shelves to take care of the storage of basketball suits or material of a rolling nature which would require a flanged front. An endless number of combinations can be made up to store various items, in either small or large quantities.

Fig. 6—Adjustable Dumb-bell and Indian club rack.

Figure 7 displays an application of a cabinet equipped with racks for the storage of dumbbells. The same type of rack is used for the storage of Indian clubs.

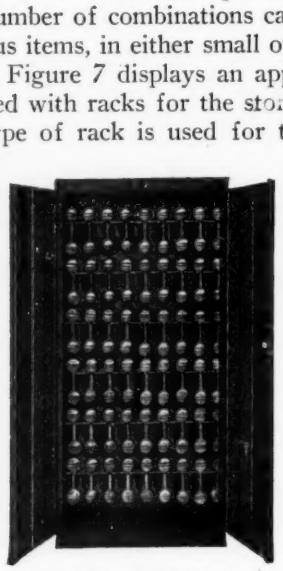


Fig. 7—Storage Cabinet equipped with adjustable racks for Dumb-bells.

Fig. 8—Storage Cabinet equipped with adjustable racks for Indian clubs.

Figure 8 shows a cabinet equipped with the racks in which are stored nine pairs of Indian clubs to each rack.

Figure 9 illustrates the use of a cabinet equipped with racks for combination Indian club and dumbbell storage. In many small gymnasiums, or for the use of small classes, this type of storage is very efficient, because enough Indian clubs and dumbbells are kept on hand to provide a pair for each member of the class. For a larger number of users, requiring additional equipment, more cabinets can be added as needed. You will notice that this cabinet is not loaded anywhere near to capacity. Storage shelves or additional racks for the storage of Indian clubs or dumbbells can be added if needed.

Another advantage of this particular type of cabinets is that they can be easily moved from one place to the other, or from one room to another, without any loss of time or without tearing anything apart. Each cabinet is a separate unit and is so designed that each of the four corners at the bottom are built up in the form of "domes of silence" which permit the cabinets being moved across any floor without scratching or marring it.

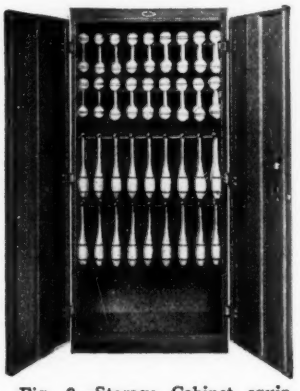


Fig. 9—Storage Cabinet equipped with racks for Combination storage.

These cabinets are equipped with a triple action locking mechanism which engages at top, bottom and center. The vertical locking bolts are concealed in the tubular reinforcement of the door, which makes for security because it is practically impossible to tamper with the locking mechanism.

Storage cabinets are usually equipped with locks, and it is another advantage to have the locks so attached that no bolt heads are exposed on the exterior of the door. There is an advantage in having the hinges so arranged that the doors may open all the way back against the side; this places them out of the way and gives an unrestricted passage way around the cabinet.

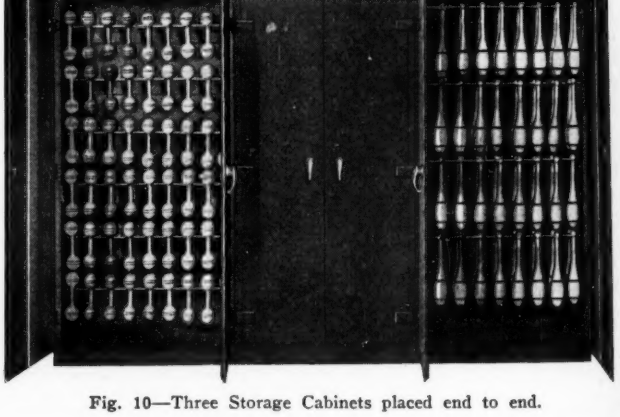


Fig. 10—Three Storage Cabinets placed end to end.

Due to the fact that these steel cabinets can be had in various widths, depths and heights, as many or as few can be purchased at one time or placed in a row as may be required. Figure 10 shows three of these cabinets placed together to provide compact and orderly storage of gym equipment.

In addition there are many other interior equipment parts that can be added to cabinet shells of this design. They can be converted into wardrobes merely by inserting a wardrobe shelf assembly, consisting of shelf coat hooks and coat rod. This wardrobe shelf is adjustable and engages in the same slots as the plain shelves or the dumbbell racks. Figure 11 shows a wardrobe cabinet of this type.

Fig. 11 — Storage Cabinet equipped with wardrobe shelf assembly.

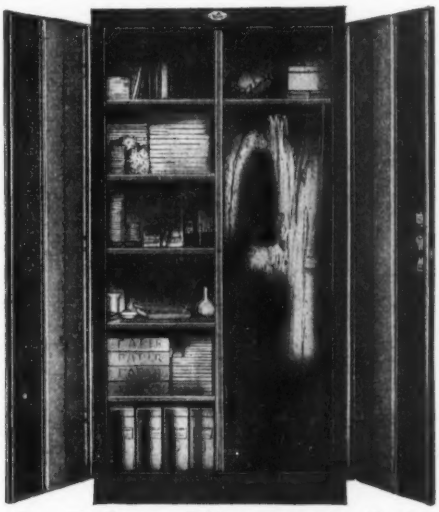


Fig. 12—Storage Cabinet equipped with full height vertical partition and half storage shelves.

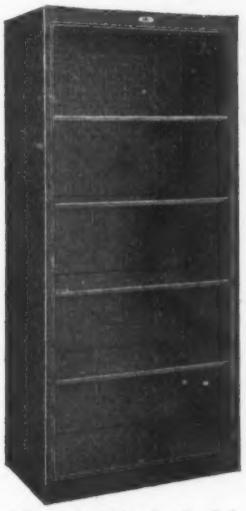


Fig. 13—"Doorless" Cabinet equipped with plain Storage shelves.

These cabinets are also arranged with slots for the easy attaching of vertical partitions which permit the engaging of half shelves on either or both sides of the partition. Figure 12 shows a cabinet of this description, equipped with full height partition, with half shelves on the left side of partition and a half wardrobe shelf on the right side. This cabinet has many possibilities such as the storage of miscellaneous equipment on the half shelves and for the storage of much larger equipment such as wands, etc., in the vertical high unit on the right side. This cabinet can also be used for the storage of First Aid supplies, bandages, records, etc., in connection with gymnasium activities.

For open storage when desired, cabinets similar to the "Doorless" shown in Figure 13 will prove very useful.

The advantages of steel cabinets over other types of similar equipment lie in the design, strength and convertible features. Steel cabinets are, in general, made of heavier gauge steel than that used in lockers; and they are also provided with extra features to give security to the stored material.

Cabinets such as we have been describing can be provided in various heights, 30½", 42", 66", and 78" high, and in standard widths of 19½" for cabinets with one door, and 36" wide for cabinets with the double doors. The depth can be varied to meet the storage conditions required and is usually from 9" up to 24", in multiples of three inches.

Steel storage cabinets can be had in a variety of colors, and as standard, the manufacturers usually finish them in olive green or a rich shade of brown which harmonizes with nearly any interior trim.

Cabinets are usually shipped set-up, that is, all erected, ready for use. It is usually advisable to have the cabinets equipped with secure, masterkeyed flat key, or grooved key locks. Cabinets are not designed to permit the use of padlocks. In order to insure the greatest degree of security it is always advisable to specify cabinets without any exposed bolt heads on top, sides, or front. Such details of construction will eliminate the possibility of chiseling off any bolt heads in order to gain access to the contents of the cabinet.

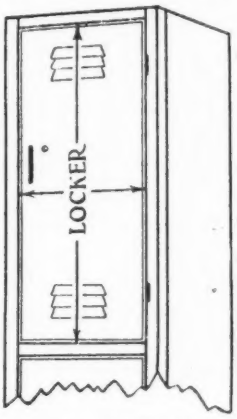


Fig. 14—A "Locker".

AS brought out before, a big advantage of this type of equipment lies in the fact that one, two, three or more shelves can be placed in the cabinet and additional ones added at any time. More shelves, racks, or other parts can be purchased as the necessity arises. No other type of equipment will give the purchaser these advantages at the same low cost.

Steel Lockers

Steel lockers are of many types. These include single tier lockers, double tier lockers, multiple tier lockers, also combinations of the three, which are covered in the general classification of Gymnasium Lockers. Under this same heading, we would also include gymnasium basket racks and trucks of various sizes and description.

In order to clarify and point out the distinction between the various types of lockers, the following explanation is given of the most general and accepted terms used in specifying lockers. The illustrations and plates presented will also assist in avoiding confusion.

Nomenclature

A Locker: The term "locker" is used to describe each opening having its own door, regardless of arrangement. (See Fig. 14.)

A Section: The term "section" is used to describe an arrangement one locker wide. A section may be made: Single Tier, Double Tier, Multiple Tier, as shown in figures No.

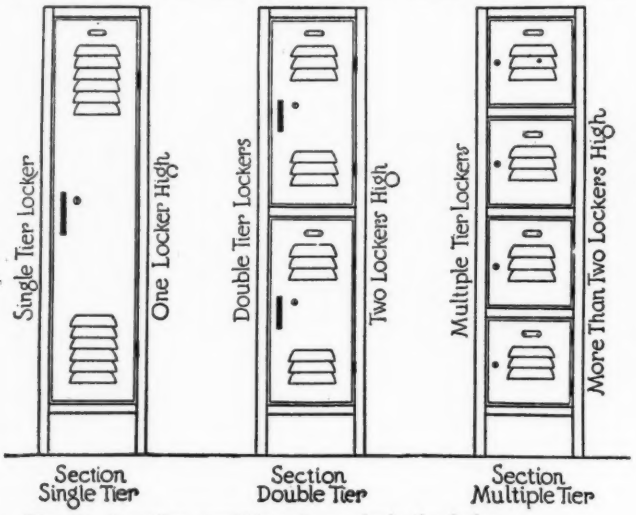


Fig. 15—A section consisting of one single tier locker.
Fig. 16—A section consisting of two double tier lockers.
Fig. 17—A section consisting of four multiple tier (Box) lockers.

15, 16, and 17. No. 18 shows two single tier lockers one locker high; No. 19 four double tier lockers, two lockers high; No. 20 ten multiple tier lockers, five lockers high. Any height more than two is considered a multiple tier locker.

A Group: The term "group" is used to describe an assembly of sections. A group may be composed of single tier, double tier, or multiple tier lockers, and may be arranged single row (that is with one face) or double row back to back (with two faces), as illustrated in figures No. 21 and 22.

An Installation: The term "installation" is used to describe the arrangement of "groups" as installed. (See figure No. 22A) In planning your installation of steel lockers, particular attention should be given to width of aisles. Dimension "A" should not be less than 24 inches. Dimension "B" should be twice the locker width, plus 12 inches as a minimum. For example, if lockers are 12 inches wide dimension "B" would be 36 inches. Dimension "C" should be the width of the locker plus 6 inches. For example, if lockers are 12 inches wide, dimension "C" should be 18 inches. These dimensions are given as a minimum. If space permits, the aisles in the locker rooms between the lockers should be wider.

Equipment

The following information on locker equipment, etc., will apply in general.

Shelves: All single tier lockers unless special, are equipped with one shelf as a standard. Double tier and multiple tier lockers are not equipped with shelves as a standard. If additional shelves are required they may be secured by specifying the number required and the position desired.

Legs: All lockers are equipped with legs as standard. Legs may be omitted if desired. This must be specified at the time of ordering.

Fig. 18—Two single tier lockers.
Fig. 19—Four double tier lockers.
Fig. 20—Ten multiple tier (Box) lockers.

Closed Bases: The term "closed base" describes the part used to close the space between the bottom of the locker and the floor. When closed bases are required, be sure to specify if fronts only are to be closed, or if closed base is also required on ends. If closed bases are required, specify if for single or double row lockers.

Specifying Sizes

Sizes should be specified as follows:

First: Width
Second: Depth
Third: Height

For example, 12″x15″x12″ would specify a locker 12 inches wide, 15 inches deep, 12 inches high. 12″x18″x60″ would specify a locker 12 inches wide, 18 inches deep, and 60 inches high.

Locker Sizes

Figure No. 23 gives a list of Simplified Locker Sizes in accordance with Simplified Practice Recommendation R-35-28, Department of Commerce. The sizes listed were determined by observation and careful analysis covering a period of years. It will usually be found a real economy to adhere to the sizes in the "Simplified List" or "Acceptable Specials" when planning locker layouts and preparing specifications previous to ordering.

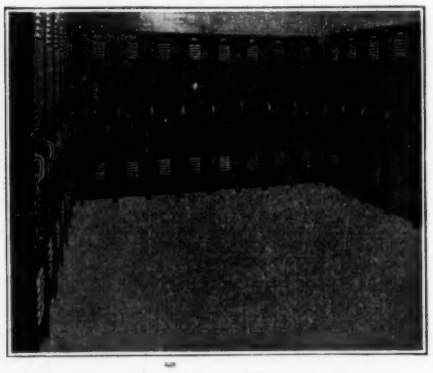
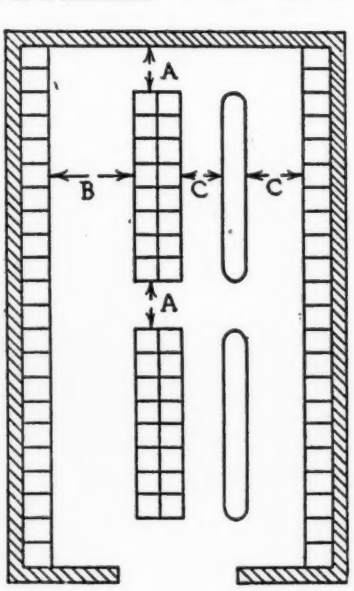


Fig. 21—Single tier, single row lockers.



INSTALLATION

Fig. 22A—Floor Plan of Installation.

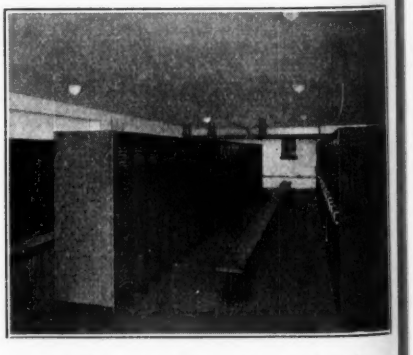


Fig. 22—Single tier, double row lockers.

Simplified List of Locker Sizes in accordance with Simplified Practice Recommendation R35-28 of Department of Commerce.

SINGLE TIER

Width*	Depth	Height	Maximum Over-all Height, Including Legs
Inches	Inches	Inches	Inches
12	12	60	66
12	15	60	66
12	18	60	66
15	15	60	66
15	18	60	66
18	21	60	66
12	12	72	78
12	15	72	78
12	18	72	78
15	15	72	78
15	18	72	78
18	18	72	78
18	21	72	78

DOUBLE TIER

Width*	Depth	Height	Maximum Over-all Height, Including Legs
Inches	Inches	Inches	Inches
12	12	30	66
12	12	36	78
12	15	36	78
15	15	36	78
12	15	42	90
15	15	42	90

MULTIPLE TIER (BOX)

Lockers per Stack	Width* Inches	Depth Inches	Height Inches	Maximum Over-all Height, Including Legs Inches
5 or 6 high	12	12	12	66 or 78
5 or 6 high	12	15	12	66 or 78
4	15	15	15	66
5	15	15	14⅖	78

*This dimension does not include the projecting bolt heads. When filling fixed spaces with rows of lockers, allowance should be made for such projections.

ACCEPTABLE SPECIALS

To guide the few who find that the "simplified list of locker sizes" will not satisfactorily fill their requirements, the following lists of acceptable specials are compiled.

These sizes, because of the possible interchangeability and adaptability of standard tools, equipment and materials, can be manufactured with reasonable economy.

SINGLE-DOUBLE TIER

Widths: 9″—12″—15″—18″—24″
Depths: 12″—15″—18″—21″—24″
Heights, single tier: 60″—72″
Heights, double tier: 30″—36″—42″

MULTIPLE TIER

Widths: 12″—15″—18″
Depths: 12″—15″—18″—21″
Heights: 12″ built 5 or 6 lockers high
15″ 4 " "
14 2/5 ″ 5 " "
18″ 4 " "
20″ 3 " "
21″ 4 " "
24″ 3 " "

Fig. 23—Locker Sizes

Types of Locker Door Perforations

Figure No. 24 illustrates the various acceptable types of locker door perforations which have been found, through years of experience, to fill satisfactorily all gymnasium locker requirements.

Both types of locker door perforations will be considered elsewhere in this article in connection with "Ventilation" of Recessed Gymnasium Lockers.

Locks

The item of locks should be given earnest consideration by prospective buyers of steel lockers, as there are so many types available. The flat key cabinet locks and padlocks are used extensively and have much to recommend them. Combination locks, both of the cabinet and padlock type can be furnished for lockers when desired. The combination lock demands the utmost care to prevent combinations from being generally known.

Locks, either cabinet or padlock, with non-rusting keys are preferred for gymnasium use. One of the advantages of having keyed locks is that in nearly every case someone in the building is provided with a master key that can be used, when the necessity arises, to operate each and every lock. Where cabinet locks are used it is an advantage to have them attached so that no bolt heads appear on the exterior surface of the locker. This adds to the security.

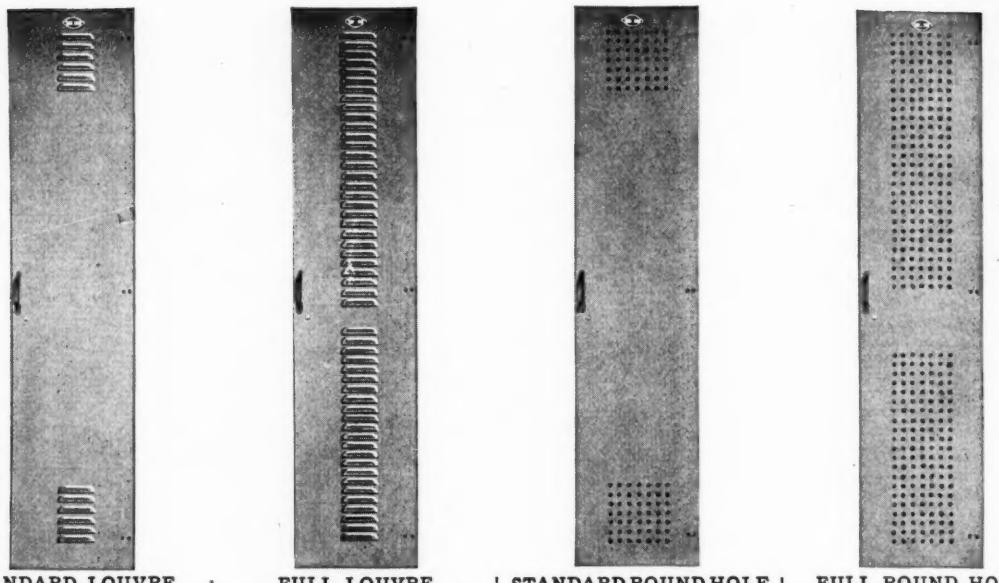
All locker doors should be provided with a padlocking attachment as standard equipment, so that when lockers are purchased without cabinet locks they can be locked with padlocks when desired. The advantages of this arrangement are later referred to in connection with "Gymnasium Units."

Sloping Top Lockers

In some localities school officials have selected lockers with sloping tops. One of the reasons advanced for this type of construction is that it prevents the placing of anything on top of the locker, an abjectionable feature in an orderly arranged locker room. This problem, however, is one rather of discipline; and, wherever possible, the purchasing of sloping top lockers should be discouraged because of the increased cost over flat top lockers. Sloping top lockers are six inches higher than flat top lockers. Illustrations No. 36 and 37 show some orderly arrangements of sloping top lockers.

Rust Proof Hardware

For gymnasium lockers, basket racks, and baskets, it is highly essential that the hardware such as coat hooks and interior bolts and nuts be thoroughly rust proofed by the Udylite or the Parker process to make sure that any moist or damp clothing hung in the lockers will not become rust-marked thereby. It should also be taken



STANDARD LOUVRE

Size of Locker	No. of Louvres Top of Door	Bottom of Door
72″ S.T.	6	6
60″ S.T.	6	6
42″ D.T.	3	3
36″ D.T.	3	3

FULL LOUVRE

Size of Locker	No. of Louvres Top of Door	Bottom of Door
72″ S.T.	29	23
60″ S.T.	23	18
42″ D.T.	16	10
36″ D.T.	13	8

STANDARD ROUND HOLE

Size of Locker	No. of Round Holes Top of Door	Bottom of Door
72″ S.T.	49	49
60″ S.T.	49	49
42″ D.T.	49	49
36″ D.T.	49	49

FULL ROUND HOLE

Size of Locker	No. of Round Holes Top of Door	Bottom of Door
72″ S.T.	196	147
60″ S.T.	196	147
42″ D.T.	112	84
36″ D.T.	98	49

Louvres are 4½″ wide x 3/16″ deep—1⅜″ apart, center to center. Round Holes are ½″ in diameter on 1″ centers.

Fig. 24—Types of locker door perforations.

into consideration that the interior of all lockers should be thoroughly painted and that no unpainted steel should be present to come in contact with clothing which may be injured by rust.

Wire baskets used in connection with basket racks and trucks so frequently found in connection with an installation of multiple tier lockers, should be finished with a heavy coating of tin by the manufacturer to prevent rust.

Finish

All lockers, etc., with the exception of wire baskets, should be thoroughly painted with a good grade enamel that is baked on. The color used is not so important except that a shade should be selected that will harmonize with the decorative scheme of the locker room, and be one that will add aesthetic value to the installation.

Lockers Without Legs on Bases

In the Gymnasium Locker Room, it is oftentimes desirable to have the lockers furnished without legs and elevated or placed on cement bases. Either single or double row lockers can be placed on cement or other bases as shown in illustration No. 25. Basket racks in either single or double row arrangement can likewise be furnished without legs for placing on bases.

When it is desirable to have lockers or gymnasium racks on cement bases, they should be requested from the manufacturer without legs and the bases should be detailed in the building plans. The regularly accepted height is approximately 6 inches for the cement bases; this height is usually sufficient to give all the features of sanitation that are expected of this type of installation.

Ventilation

In connection with the recessed lockers and the types of gym lockers which are set or mounted on cement bases, it is sometimes considered necessary to ventilate them; therefore, the subject of ventilating systems will receive some consideration in this article.

Constant and uniform ventilation of a large installation of lockers is difficult to secure. However, there are several systems which seem to give a degree of satisfactory service.

In general, locker ventilating systems are of the concrete base duct or metal pipe duct types. Where the position of the locker is practically permanent, the concrete base will be found very satisfactory. Care must be taken, however, in setting the lockers to secure air-tight joints, so that the air must come in through the locker.

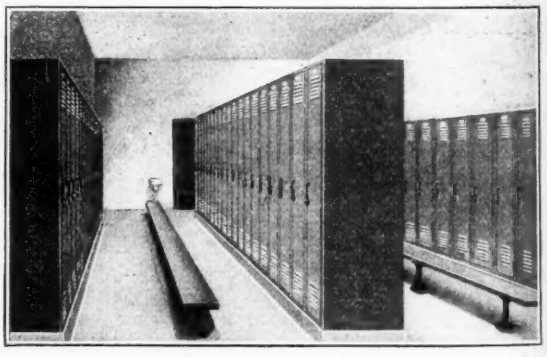


Fig. 25—A well arranged "Team" locker room.

The pipe system may be made equally as satisfactory as the concrete ducts, if the lockers are connected to

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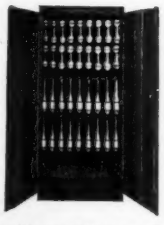

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ventilating stacks and exhaust fans are used to create a slight vacuum. It will generally be found impracticable to secure complete ventilation by a gravity ventilating stack or by fans drawing air out of the room. When more complete ventilation is required, as in the case of gymnasium locker rooms, a blower should be used in addition to the exhaust fans. The area of the ventilating ducts should exceed the area of all ventilating openings in connection with the lockers.

Where lockers are connected to a pipe air duct at the top, the bottom of the doors only should be louvred. Where they are connected to a duct in the cement base, then only the tops of the doors are louvred.

The flow of air can be regulated to a certain extent by a damper plate placed over the perforations in the lockers which connect to the vent, but this has not always proven successful. The students are likely to tamper with the plates when closed or only partly closed.

The big drawback of forced ventilation is that all of the lockers seldom receive the same air supply or suction. Lockers nearest the main duct have a good draft, while those farther along the line receive little, if any. This has led to the installation of the dampers described but very little has been done to perfect the system. The ventilation of lockers is a problem for the ventilating engineers and experts to work out. It rests with these engineers to provide a system that will give entire satisfaction under all conditions.

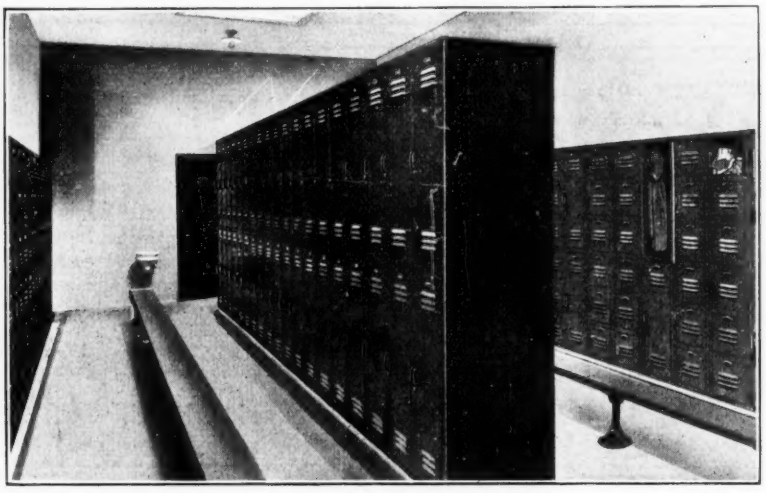

Fig. 25A—Double and multiple tier lockers in boys' locker room. Wheaton, Ill., H. S.

Anchoring

Purchasers of lockers should see that careful consideration be given by the architect and the contractor for placing "grounds" for efficient and secure anchoring of the lockers. Recessed lockers and those mounted on cement bases must be properly anchored, or they will cause no end of trouble. The bases on which the lockers rest should provide bearing for at least the front and back edges of the lockers. At the time lockers are contemplated, manufacturers are always glad to cooperate with the owner, architect, and builder by providing necessary information for the proper building of the recesses and bases.

Single Tier Lockers

When lockers are to be installed in gymnasium locker rooms, special consideration should be given to the arrangement or grouping as this has an important bearing on the cost.

The most economical arrangement can be arrived at by placing as many lockers as possible in each group or row. If any of these groups can be placed back to back, that is, in double row arrangement, so that one back can serve two lockers, an additional saving can be effected. Another factor which contributes to economy is adherence to well established standard types and sizes of lockers. (Refer to Figure No. 22A for floor plan and factors to consider.) Figure No. 23 gives standard and preferred sizes of lockers.

Single Tier Lockers provide service in a most convenient form. They usually come in 60 inch or 72 inch heights and are made in various widths and depths.

A single tier locker of small dimensions, usually 12 inches wide, 12 inches deep and 60 inches high, not considering the length of legs, capably takes care of any ordinary requirement for individual use. The size of the locker may need to be increased in the case of team rooms in order to make the storing of athletic uniforms, etc., more convenient.

The single tier locker, in general, is the only type of locker which is regularly provided with a hat shelf. This shelf, however, decreases the space for the hanging of clothes, and for that reason, authorities generally hold that a 72 inch locker is, for the average use, better than a 60 inch locker.

The orderly and efficient arrangement of a gym locker room, like that shown in Illustration No. 25, is a strong argument in favor of the modern locker room equipment as compared to the old antiquated method of cloak rooms. This picture illustrates equipment of 72 inch lockers with sufficiently wide aisles and suitable bench equipment. The lockers are both single row and double row which utilizes the available floor space without crowding. This room and lockers are for the "Team" in a consolidated high school in a small city.

Double Tier Lockers

The double tier locker is economical both as to space and cost. Necessarily, it is more cramped and provides less storage capacity. The hat shelf is omitted. The double tier locker, however, has been found quite satisfactory, particularly for younger pupils in grade schools, and when used in combination with single tier lockers to form what are termed "Gymnasium Units."

Double tier lockers are sometimes used in combinations with multiple tier lockers for gym rooms as shown in Illustration 25A.

(Concluded in October issue)

Mental Hygiene Aspects of Physical Education

(Continued from page 11)

ketball, football, soccer, hockey, baseball. To be sure many of these students were obliged to do this because there were not enough teams to go around, and they were not good enough to make the team or a substitute one.

And why are these solitary forms of recreation unwholesome? In the education of the personality of a human being we are coming more and more to realize that the qualities which make for adaptability are extremely important ingredients of mental health. The world wants trained men and women in its professions and business life, and its home makers; it wants men and women who can stand criticism and disappointment and defeat, who can control their emotions and manage their instincts; who can submerge their individualism for the good of the group with which they are working. These are characteristics that are not acquired from reading books or hearing lectures, nor are they imparted from cut and dried advice handed down from parent or teacher to child and adolescent. They are learned only by rubbing up against the give and take of competitive struggle. The playground of prep-school and college is as yet an undeveloped training school for the playground of life.

It should be as truly an educational preparation for life as any other part of an academic program. There is no reason why honest competitive struggle on playground is any more demoralizing and conducive to the development of pugnacious tendencies in youth than is competitive struggle for Phi Beta Kappa or senior honors or parts in dramatics. But athletics should be for everybody, not for a select few, so that any student body is divided into the athletes and the rest of them. Opportunity for the contests of group play should be for everybody—not for a specially selected few who by reason of weight or build or special interests go in for athletics as a sort of specialty. Such lines of demarcation head towards a professionalism that can easily become commercialized, and in so doing decline into pugilistic contest. Examples of the wholesome sort of competitive play I refer to are found in the splendid work of what Dr. William Burdick of our Playground Athletic League in Maryland has done with high and elementary school boys and girls through the state.

"UNDER such a program in Maryland, 57 per cent of the girls last year (from the fourth grade up) participated in individual badge tests; 277 teams with 3,247 individuals of 12,134 girls in the high schools in Maryland participated in competition. A girls' carnival with 3,998 different girls participating and a gross participation of school children ranging from 3,980 of a total school population of 6,630 in Montgomery County, to 5,958 from a total school population of 17,428 in Baltimore County, gives one an idea of the amount of participation in Maryland. Sixty-six per cent of schools

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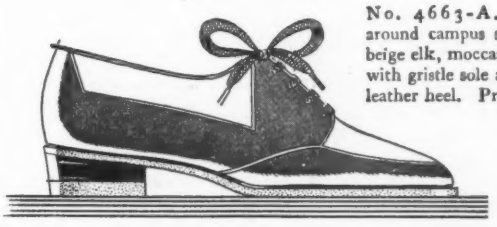

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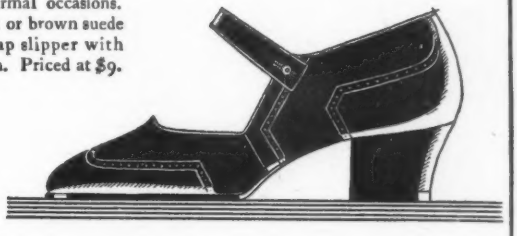

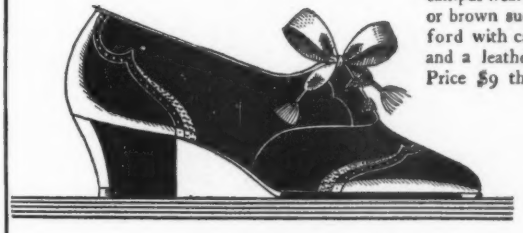

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and teachers of Maryland came to the Field Days where intensive competition was carried on.

"The girls are healthier as indicated by the fact that 19 per cent in the early examinations in 1922 as compared with 25 per cent in 1925 show how the proportion of girls free from medical and dental defects has increased. At one county where we have had this plan of an activity program, 43 per cent in the high schools were free from medical and dental defects and in one school 52 per cent were free. The educators of the State are advising and urging this program, and when asked whether they wanted an inter-school competition leading to a State Championship of Field Ball, 17 of the 23 superintendents asked for it, and at the end of the season 21 participated."

Or there is the physical education work done at our School No. 76 in Baltimore, under the splendid leadership of Miss Iglehart. The large gymnasium of this school and the playground is in use every hour of the day by all the children, who range in age from kindergarten through Junior High School. Morever the fathers and mothers, older brothers and sisters of these children have their chance at this equipment. Locust Point section of our city has the smallest percentage of Juvenile Court and delinquent institution registration of any section in Baltimore. One of the most inspiring sights is to see the basketball team of grandmothers, organized on their own initiative. It frequently meets on Monday night, robbing wash day of its horrors. The social significance of this sort of community life is inestimable.

I am in entire sympathy with that newer trend in physical education which is expressing itself in rhythmical and expressive gymnastics, but I should deplore any tendency to commit physical education for our sex entirely to this one form of educational training. There are joys for self-expression other than those originating in the fantastic, imaginative aspects of our personality.

Popularizing Correctives

(Continued from page 33)

a class has been left to itself all hour and has volunteered later that everyone had done all her individual exercises through twice. Another thing that would impress the visitor is the general spirit of gaiety. In fact, our neighbors complain that we make too much noise, but there really are so many funny things happening every day that we just have to laugh together.

Group activities for the last part of the lesson period were about the same for all classes. General postural and foot games were stressed, although many other games and folk dances were put in. A few of the corrective games used are listed here and explained. Many of these are not original.

I. FOOT STUNTS (all done barefooted)

A. Pencil writing contests and races of all sorts—drawing pictures of teacher and having an art exhibit.

B. Pigeon toed races.

C. Heel toe relays, touching heel to toe at each step.

D. Measuring feet of various teams by having the entire team line up with heels touching toes to see which team has the longest feet.
E. Drawing around foot with weight on, then drawing around shoe to see differences in size and shape.
F. Making paper wads with the feet and throwing paper as far as possible.
G. Marble games of all sorts—all up relay, carrying marbles between toes, target toss, rolling through holes.
H. Checkers.
I. Tug of war, holding rope with toes.
J. Relays with a large light ball propelled by the feet—ordinary kick relays, figure eight relays.
K. Picking up objects with toes and passing them down the line in relay formation.
L. Stocking races.
M. Drawing a line on the floor with chalk held by the toes, each person writing until she drops the chalk.

In all relays care has to be taken that correctness of exercise is not sacrificed for speed.

II. POSTURE STUNTS

A. Book or bean bag on head relay.
B. Over and under relays (done properly).
C. Lying down in small groups in a circle, feet inward. Try to keep a large balloon-like ball in the air with the feet. Count the number of times the ball touches the floor in three minutes. (lordosis)
D. Head juggle—in small teams, try to keep a large light ball in the air with the head.
E. Frequent posture tests.
F. "Mentality"—a volley ball-like game played by two teams who face each other with a net between. A large double balloon (from the ten cent store) is volleyed across the net just as in volley ball, but the head is used in all playing instead of the hands. This involves some jumping and a great deal of stretching of spines and necks. Rules can be as complicated or simple as desired. For details of the game see "The Sportswoman," 6:6. Feb. 1930.

"Mentality" developed gradually in classes this year and the girls felt a certain amount of pride in having created a new game and in discovering details of playing that would work. It was essentially the child of their own invention and each of the nine classes vied with each other in developing the game. Finally twenty teams were formed from the corrective classes, and a regular after-school tournament played off. Team names, such as Mighty Head Knockers, Head Lights, Noodle Punchers, Herculeans, and Jolly Jumpers, added to the zest of the tournament. For many of the girls it was the first team playing they had ever done.

At the end of the first quarter, when physical examinations were repeated in the corrective classes and some few girls advised to go into regular classes, there was a general protest, and some girls from general classes were even suspected of faking difficulties to get into corrective classes.

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Aristotle on Kinesiology (**Continued from page 16**)

ceed only on a support which is placed—up to a certain point—under them, and in a milieu which gives way to them." Among these observations of Aristotle, relative to the synergy of the different parts of the body in movement, we note the following statements as well: The birds would not be able to fly if one removed their feet and they would not be able to walk if one removed their wings, no more than a man can walk without moving the shoulders. In a word, if there were no flexion in the limbs, in the shoulders and in the hips, the animals which have blood and feet would be wholly unable to displace themselves. In the same manner, there is no possibility of flexion, if there is not likewise, a point of inertia.

The animal which is destined to walk erect ought to have the upper parts of the body more light and the lower parts more heavy, for it is due to this unique condition that it is possible for the animal to carry itself with ease. Moreover, it is for this same reason that man *who is the only one among all the animals to carry himself erect* has—proportionately to the height of the body—longer limbs than all other creatures provided with feet. And man also has stronger limbs. The case of the infants will be sufficient to complete the evidence in favor of this observation. They are unable to walk erect because they all belong to the species of dwarfs. Moreover, among infants—as among dwarfs—the upper parts of the body are greater and stronger, proportionately, than the parts below. On the other hand, with the progress of age it is the lower parts which develop more. The development continues up to the time that the infant has received the growth suitable to his nature. Then he is able to walk erect, thanks to the proportions that his body has taken.

Of all the qualifications which have been given to man, those of Aristotle are the most accurate: to wit, man is the thinking animal and the animal which carries itself erect. It is clear that such qualifications make note of the essential difference which separates man from the other animals. It is for this very reason that Natural History has conserved these terms in qualifying the human summit of the zoological ladder sometimes as *homo sapiens* and sometimes as *homo erectus.*

The Mechanics of Walking

Alongside of these kinetic observations, Aristotle also gives us a very interesting mechanical analysis of the walk. Considering the walk of men whose lower limbs are in good condition, we may readily observe that the weight of the body is conveyed alternately from one limb to the other. Moreover, when the animal moves ahead, the foot which is carried and placed ahead of the other should not at all carry the weight. Then, the walk continuing immediately, it is necessary that the weight pass successively on the foot which receives it; and, necessarily, the limb, after its flexion, should straighten itself again.

With man the flexions of the limbs are always reciprocally and successively contrary. Thus, the elbow is folded on the inside, the back of the hand is convex, and the shoulder, for its part, is likewise convex. The same condition holds with respect to the entire leg: the thigh is inflected in a concave manner and the knee in a convex manner. The feet are inflected in a concave manner—in opposition to the inflection of the knee.

Furthermore, apropos of the above-mentioned analysis of walking, Aristotle has made a very important observation in his *Mechanics* (30). He says that all those who—when seated on a chair—desire to arise to the erect position, place the leg at an angle to the thigh, and make the same action with the trunk. Obviously, if they would continue to have the trunk and the legs perpendicular at the thighs it would be impossible for them to arise because "equality produces inertia everywhere; or, the right angle belongs to equality and thus induces the inert position."

Anaxagora maintained that man is the most intelligent of creatures because he has hands; but Aristotle points out, quite to the contrary, that man has hands only because he is so intelligent. The hands are really an instrument; and Nature, in the manner of a wise man, understands well enough to confer qualities upon those who are capable of making use of them (The Parts of Animals, IV, 10).

With man the disposition of the posterior parts and that of the legs is very specially adapted to his needs. Man has a rump, fleshy lower limbs, thighs and legs; whereas, in all the other animals, these parts are unprovided with flesh. The cause—the unique cause, one may even say—of all these peculiarities is that man is the only one of all the animals that carries itself erect. In view of assisting man in carrying the upper parts easily, Nature has made them lighter, and she has also diminished the material of the upper parts in order to add weight to those below. That is why the structure of the rump is so managed that it can also serve as a means of repose. The quadrupeds remain standing without effort and they are able to rest continually in that position; for, with their four supports, they are always in a position of rest. But with man it is

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not an easy matter to remain standing for a long time. Consequently, his body has need of a seat and of repose.

The Bones are the Support of the Organism. Movement is Made by the Sinews and not by the Bones.

In Aristotle's writings we also find the following information concerning the nature of the osseous system and the practical aim of each part of the skeleton.

1. The bones are destined either for movement or to serve as a support and point of support for the rest of the organism. Moreover, they serve to hold and to shelter the other organs. There are indeed several which can be considered as starting points, or origins—the limb, or the part of the body to which it belongs. They hold and shelter organs as the bony box of the skull holds and shelters the brain. They enclose, as the sides enclose the viscera which are in the thoracic cage. The origin and center of the skeleton is the dorsal spine. There are also the bones that tie and fence up, as the clavicle which has probably received its name for that very reason. 2. In that which concerns utility, all the bones are well made and all have been created for a specific purpose. For example, the radius bone has for an aim the rotation of the hand and the fore-arm. Without the radius bone it would be impossible to execute the pronation and supination of the hand and the fore-arm. In the same way, it would be impossible to raise the legs if they did not also have two bones. The patella serves as a communication for the two parts of the lower limb. It is not the bones which are the organs of movement, but, rather, the sinews. In sum, Nature has constructed each organ capable of making its own movements in contributing to the displacement of the whole body for every natural external usage.

Conclusion

That which we have just said, is the ensemble of the scientific findings on which Aristotle has based his theories of physical education. Compared with the enormous freight of scientific knowledge of every young man of our days who has passed through a University, it is indeed too little. And, if we should have in mind that many of the findings are false their absolute value becomes still smaller. Yet, this little bit of theoretical knowledge combined with his practical knowledge regarding physical exercises sufficed for him to conceive and to formulate the general lines of a complete system of physical education, and to show thus to the specialists of his age—the gymnasts and paedotribes—the way which they ought to follow. It is this complete education of the body and the soul, and the practical knowledge of the means of physical education of their time, which endowed the philosophers of that age with such an astounding competence in this field. Apropos of this matter, the Italian physiologist, Angelo Mosso, has written[22] as follows: A large number of the questions

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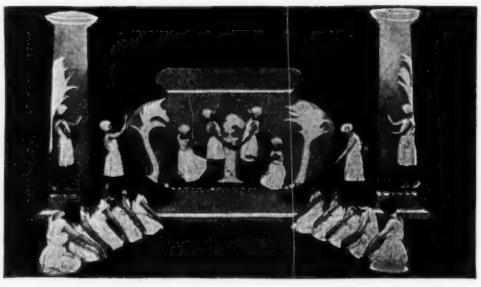

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brought to light in the art of gymnastics were discussed and resolved four centuries before the beginnings of the Christian era, "while the scientific men of our day, in spite of the formidable pile of biological findings which present day science has placed at their disposal, have not yet succeeded in finding a solution."

If this little study has no other value, it shows clearly enough, I hope, that the question of physical education was always of paramount importance to the greatest philosophers and scientists of ancient Greece. As Philostrates tells us, these philosophers and scientists believed that gymnastics was not at all inferior to any other art or skill. On the contrary they considered it so worthy a science that books were written for the benefit of those who would become masters of gymnastics (Philostrates, Concerning Gymnastics, I, 4).

There is no doubt that so live an interest on the part of the great thinkers has contributed much to the conservation of this institution of ancient Hellas, during so many centuries. May present day pedagogic science be able to embrace the same ideal of development and of the complete culture of man. May it also comprehend that primarily the beginning and end of all civilization is man himself, *the whole man,* evaluated according to the order Nature has established in him.

As in that good old time of ancient Greece, let it be not only the thinkers but also the legislators who give to physical education the place which it merits in a *complete* plan of the organization of a city. Then only will we be assured of a new civilization which will be capable of meeting the needs of actual life and of assuring the sons of men the unity of thought and action, coordination and eurythmics of *intellectual* and *physical* life, without which the life of civilized man will never be differentiated clearly from that of semi-civilized man.

[12] In his work on physical exercises and intellectual development; Paris, 1904, page 13.

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The Control of Ringworm

(Concluded from page 13)

all students who report to us for daily treatment, or bring us a note that they have been adequately treated by their family physicians or skin specialists. We made the discovery early in the game that if we merely gave directions for treatment, the students would unintelligently carry out these directions or would, on occasion, neglect them. Consequently, we came to the erroneous conclusion that many of the drugs used for treating the condition were useless. A large number of drugs are of value, but so far we have found nothing which is specific for *all* cases of ringworm.

BECAUSE the parasite as a rule does not lie in the deeper layers of the skin, the first effort made is to cause a generous desquamation of the skin over the lesion. Salicylic acid in alcohol and acetone solutions are efficacious for this purpose. It is important not to overtreat because, if raw surfaces develop, secondary infection may set in and be much more serious than the original infection. Secondary infection also helps to keep the original ringworm infection alive; such cases are the most persistent ones—may even become practically incurable. Some of the formulas in use in our Health Service are as follows:

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	grams or c.c.
Benzoic acid	5.
Salicylic acid	5.
Acetone	25.
50% Alcohol	65.

NUMBER 2

	grams or c.c.
Salicylic acid	20.
95% Alcohol	80.

NUMBER 3

	grams or c.c.
Tinc. of Iodine	20.
Spirits of Camphor	78.
Phenol	2.

NUMBER 4

	grams or c.c.
Salicylic acid	15.
Benzoic acid	7.5
Thymol iodide	1.5
Anhydrous lanolin	19.
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We have omitted all messy preparations or remedies which seem to the patient and ourselves as worse than the disease. Any cases which do not clear up with the faithful treatment by simple remedies, we treat further with ultra-violet light or X-ray. A very few have not been cured by any treatment so far used and these have been our principal discouragement.

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(Concluded from page 35)

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Uniform Certification Urged

(Concluded from page 22)

courses. This circumstance creates a situation in which an institution with courses identical in content to the requirements of a state is not accredited by the state because the difference in terminology obscures that identity.[2]

2. It is recommended that teacher training institutions and state departments of education agree on a standard interpretation of the semester hour. The present lack of uniformity is both confusing to all and unfair to the applicant for certification.[2]

3. It is recommended that state departments of education discontinue the differentiation of semester hour requirements into academic and professional subjects. The suggestion is offered as a remedy for the confusion which now arises from the absence of agreement on definition. To illustrate the situation, it is possible for an applicant to be denied certification because of failure to meet the total of semester hours required by the state in academic or professional subjects but whose subjects are identical to those required by the state. The discrepancy lies in the matter of definition. The state defines a given subject as academic while the institution classifies it as professional. The possibilities for confusion and unfairness are obvious.

If courses were listed by the institution and by the state department on a basis of value for preparing the teacher, and if state departments omitted the requirement calling for a stated number of semester hours in academic or professional subjects, it is believed that most of the present known difficulties would be removed.[2]

4. It is recommended that a high correlation be effected between the state certification requirements and the teacher training courses of the state university, teachers college, or normal school. This recommendation is based on the factor of protection for both the teacher and the state.

[2] Recommendations based on the Report of the Committee on the Physical Education Curriculum in Professional Schools, 1929, American Physical Education Association, Dr. J. H. McCurdy, Chairman.

Field Sec'y for Women's Division, N.A.A.F.

Miss Anne Frances Hodgkins has been appointed to the position of Field Secretary for the Women's Division of the National Amateur Athletic Federation. This was announced at the annual meeting in Boston last April.

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Proper Archery Technique

(Concluded from page 26)

upon your aim for a second or two, straighten the fingers of the right hand—BING! Do not move another muscle. Do not even look up from the point of aim until you hear the arrow hit the target. Looking up too quickly, (peeking) will cause you to jerk your bow hand up, and will make your arrow go high. Letting your hand creep forward as you loose, (creeping) will make your arrow go low, as will dropping your bow arm. Jerking your hand away from your face will usually cause your arrow to go right, and hunching the shoulder or flicking your left wrist will cause it to go to the left. Proper form requires no movement whatever except of those three fingers that hold the bowstring. You can always tell the best shots at a tournament from afar, as at a distance you cannot see any movement when they shoot, except the flash of the bows in the sun and the flicker of their speeding arrows.

AUTHOR'S NOTE: I have been impelled to write the foregoing article, not at all because of a desire to criticize the way that archery is now being taught at most schools and colleges, but rather because every coach that I have ever met and talked with, has been so open minded and so friendly that they have whetted my desire to assist them. I cannot speak too highly of the splendid cooperation that I have received on every hand, nor can I fail to admire the fine spirit that prompts it.

"Tag" Speedball

(Concluded from page 36)

ate this type of game, as it is about as fast as basketball and spreads over an area more than ten times as large. This very fact of increased area opens up the play, body contact is at a minimum, and the skillful player rarely allows himself to be tagged when running with the ball —he drops it at the last moment to the ground and continues the attack with a foot dribble or passes or kicks. The game is no more difficult to officiate than other games of this type.

It might appear that running with the ball would lead to abundant and easy scoring—but the fact is that it is very difficult to score on a running play, perhaps more so than in regular football, because no advance protection is allowed and the running player must be tagged only—not tackled. In addition he generally has three to six defensive players to out-maneuver who are facing him, with others trying to tag him from the side or rear. A running score is generally well earned.

We have completed two seasons of "Tag" Speedball and our players are unanimous in their approval of this feature of the game. The game is not at all complicated and affords a chance for interesting practice in the fundamentals of a number of the well known team games. "Tag" Speedball simply combines these fundamentals into game form.

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More Complete Living Through Physical and Health Education

(Concluded from page 6)

Then again, our method of selecting the county superintendent of schools is often a great handicap to education. A mistaken idea of democracy and local self-government has sometimes led to the selection of county superintendents of schools by popular vote. Under present conditions we cannot hope for uniform progress in education, especially in the rural sections, until we have eliminated this elective method of securing the professional educational expert, who is the chief executive officer of the board of education.

The situation on the whole warrants the conclusion that in the final analysis the right kind and amount of progress in physical and health education, as well as in all other aspects of education, await the time when the people in the various states shall set up, through laws and regulations, desirable minimum standards for the educational and professional training of the school administrator, as well as fix responsibility for the selection and tenure of the county superintendent upon a properly constituted board of education.

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